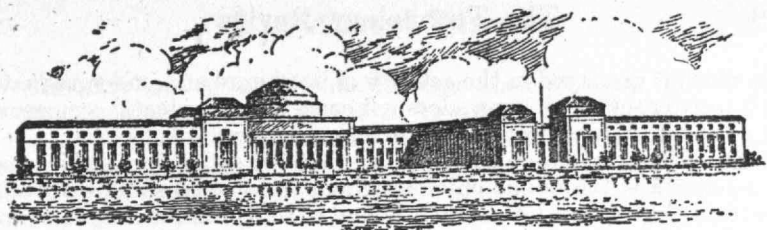


ARTHUR D. LITTLE, '85
President of the Alumni Association

technology review

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THE ALUMNI DIRECTOR

TECHNOLOGY has been without an Alumni Director since Ike Litchfield, Class of '85, went into war service in June, 1917. For some time, however, a committee appointed by the Alumni Council, at the direction of the Technology Reunion held in June, 1919, has had the question of a new Director under consideration. In fairness to this committee it should be stated that their apparent delay in reporting has been due in part, at least, to the fact that Technology has not yet secured a new president. It is breaking no confidences to say in this connection that one matter which President Nichols had under consideration and in which he expressed great interest was the question of an Alumni Director.

The duties of an Alumni Director and his place in the staff organization of Technology are subject matter for research as well as discussion. It is easy to write a specification for such a man, but not so easy to find the superman to fit the specification. Moreover, after the specification has been drawn, an analysis of it may suggest that some of the functions specified do not necessarily belong to the Alumni. In this field of speculation one might even ask what is the Alumni body, what are its powers, and why should it be organized? As is well known there is no organization similar to the American alumni bodies in foreign institutions of learning, and our own Alumni Association was often spoken of by our late President, Dr. Maclaurin, with both wonder and amazement.

The alumni of an American institution of learning is basically, perhaps, an organization founded upon sentiment, but in addition it is a body which exists for the mutual well-being of the institution whose name it bears and the individual members of the alumni organization.

In America at least the fame of an institution of learning is based not so much on the age of the institution as on the spirit of the institu-

tion which is displayed in the activity of its alumni and undergraduates. Such activity, as we all know, does not come from accidental occurrences but is based on organization and practical coöperation.

It does not seem too much to say that the active force which may be described as the public opinion behind every successful institution of learning has always been, and is bound to be, the alumni organization. The alumni corresponds very closely with the stockholders of a corporation, for in every sense of the word they own the institution whose name they bear. Their stockholdings it is true are those of sentiment, but it can be conclusively shown that the continued and future success of any such institution must necessarily depend on the interest and success of the individual stockholder or alumnus.

The question of an Alumni Director at Technology is not a new one. It may be said that Technology was the first institution of learning to have such a director. Before Litchfield took active charge of our Alumni in 1904, other colleges had had alumni secretaries, but no scientifically laid-out work had been done to build up a complete organization. The Technology Alumni Association as of that date was in reality a local group which held a dinner once a year. There was no such thing at that time as the Technology spirit of which we talk so much today.

In a few large cities there was, to be sure, some pretense of having a local organization, but there was no complete organization throughout the United States, and even the world, such as Technology had prior to the war. There was no complete organization of the classes, no Alumni Council, and, to sum it all, no Technology spirit.

The present-day standing of the Technology Alumni organization, which is commented upon and admired by every other college alumnus in the country, was the result of no accident, but was the product of a carefully and scientifically organized campaign headed by an unusual man in the position of Alumni Director.

One of the great difficulties which the present committee has found in drawing up adequate specifications for the position, aside from finding the man to fill it, is that the previous Director made the position rather than the position making the man. The result is that we expect perhaps more to come of the position in the future than we should.

After all, then, what are the functions of an Alumni Director, what is his place and why should he exist? Cannot a parallel be drawn between our present-day Alumni Association and a chamber of commerce? The president of such an organization in any large city must be a necessity, a more or less honorary officer, since the demands on the executive are such that a permanent paid official must do the actual work even though he be invisible to the public eye. In the same way the Technology Alumni organization has now grown so large that the president can hardly spare enough of his personal time to direct its many activities, and there should be a permanent executive head to carry on both the work of the position and the policies that are initiated from year to year.

But this idea of an Alumni Director does not meet the thought or the specification which seems to be agreed upon by many of the alumni, for the opinion has come from many quarters that the Alumni Director should be a "big" man with consequently a "big" salary; should travel among the alumni and be able to meet "big" men on an equal basis.

An analysis of such specifications immediately brings up the question of where such a man would fit in the general staff organization of Technology, aside from who is to pay the salary and the general overhead expenses that would go with such an executive. The question can immediately be asked, "Will such a man represent the Institute of Technology or the Technology Alumni Association?" The answer can be, "Are not the terms synonymous?" If this is so the question can then be asked, "Does the Alumni Director report to the President of Technology or is he a separate entity whose policies and acts are independent of the general policies and acts of Technology?"

It is immediately apparent that such a specification for a Director contains items which must necessarily be under the direction of the President of the Institute, for he alone is responsible to the public and the alumni for its policies.

The question of the Director has been discussed with many prominent alumni and they agree that what the outside alumni wish is not so much to have an Alumni Director meet with them, but they want an Alumni Director who can so arrange it that the President of Technology will meet with them and be presented to their city. In other words they want a man who can carry on behind the scenes.

If, however, the popular conception of an Alumni Director, that is, one who can organize the alumni and also can appear for the alumni in the Institute, is a true one, it would seem that such a Director must either represent a dual personality paid for in part by the Corporation and in part by the alumni and responsible in part to the President of Technology and to the president of the Alumni Association, or that there should be two persons each with separate functions, one the Director of the Alumni Association and the other who, for want of a better name, we might call, the Dean of the Alumni.

It can be said and is of course true that any man who has gone to Technology becomes and remains a Technology man wherever he may be. This being so there is no reason why Technology should, so to speak, drop her men as soon as they leave her confines. There is no reason why Technology should lose track of and forget her men, until she wants money. In fact there is every reason why Technology should keep in touch with her men, and what they are doing, and serve them in every possible way for the alumni is the great fountainhead from which the future resources of the Institute are bound to come. It would seem that such resources should be carefully guarded.

The President of Technology, it must be agreed, is the person whom the public and the alumni want to see. Superman though he may be, however, he cannot do everything and it would seem as though

he might delegate certain of his duties to a Vice-President or others, but the duty of meeting the public and the alumni hardly can be delegated to others.

As one prominent alumnus said, "The usual specification and conception of an Alumni Director would seem to me to indicate that a man was to be appointed who was to work on the same level with the President of the Institute; in other words, it would seem similar to a case of the stockholders of my organization electing a man to check up me, the president of the organization. My answer of course to the stockholders would be, 'Don't elect a man to work with me, but put someone else in my place.'"

In the same way it would seem that, while the Alumni organization in the past may perhaps of necessity have taken over certain functions which perhaps may properly belong to the Corporation and may again do this in the future, in drawing up the specifications for an Alumni Director at the present time, such specifications should be for a man who for the most part, will work behind the scenes and who will see to it that things that should be done are done, and that the president of the Alumni organization, whoever he may be, does not go wrong. If such a man, once in the position, is capable of carrying on larger responsibilities, it will undoubtedly be a case of the man making the place and not the place making the man.

MERTON L. EMERSON.

DEAN TALBOT FAVORS INCREASE IN STUDENT TAX

THE student body having passed on the proposed raise in the student tax, the Administrative Committee of the Institute will consider it before it goes to the Executive Committee of the Corporation. In an interview, Dean Talbot expressed himself as favoring the raise. In this, as in every other question of student affairs, Dean Talbot shows his regard for the wishes of the student body.

"I believe the increase in the tax will be a good thing, not merely from the standpoint of personal opinion; but because the students have expressed themselves as wishing it," the Dean said. He further stated that he believed the matter had been fairly laid before the student body, and that the votes of the different classes were as nearly representative of the feeling of the classes as was possible to secure. He is of the opinion that the measure will meet the approval of the Administrative Committee and will probably go to the Executive Committee with their recommendation.

The members of the Alumni Council have unanimously voted their approval of the revision, following the balloting of the undergraduates.

THE FINANCIAL STATUS OF THE INSTITUTE

Some Statistics Suggested by the President's Report

BY L. M. PASSANO, *Professor of Mathematics*

UNDER the caption "Financial Status" in the 1922 President's Report there occurs the following statement: "It therefore appears that practically all of the increase in cost per student figures in additional payment for instruction and little in additional overhead."

Later on, under the same caption, it is said that "if events are to follow their natural course with respect to immediate increase in staff and subsequent increase in the higher grades, the chance amounts to practically a certainty that we must be prepared to raise large additional endowments for salaries or materially to increase our tuition charges, or (particularly if the number of students should seriously diminish) even to be resigned to reductions in our salary scale for permanent officers."

This last statement, presumably, applies to permanent officers of instruction, for whom the salary scale has only very recently, through the generosity of alumni and others, been made in any degree commensurate with their services. Since it is only in the last year or two that effort has been made to improve the financial status of our teachers, it seems desirable to make comparison of various items of receipt and expenditure at the Institute for a longer period of time than one year, in order to bring out, if possible, the causes underlying the increase in cost referred to; the main theme in the report of the Administrative Committee. For this purpose the writer has compared the items in the Treasurer's Report for the year 1917 with those for the year 1922.

It will be noted, on examination of the tabular list of items at the end of this article, that the percentage increase in cost due to instruction is very moderate as compared to that due to administration, operation and maintenance. That is, the increase in cost of "instruction," the most important "operation" of the educational "plant," falls far below the increase in cost of less important subsidiary "operations" of that "plant." This would seem to indicate better ways of retrenchment, if retrenchment becomes necessary, than those suggested in the quotations at the beginning of this article.

All items, both of income and expenditure, have increased, so that it is the relative increase of the various items that must be examined. Thus (Item I following) it is seen that the total expenditure has increased 207 per cent while the total income has increased 185 per cent, so that a credit balance of \$45,723.57 in 1917 is transformed in 1922 into a debit balance of \$30,809.97. In reckoning the increased expenditure, the cause of the deficit, it must be noted, however, that salaries of teachers increased 121 per cent; administration, 150 per cent; opera-

tion and maintenance, 268 per cent; all costs, except teaching, combined, 311 per cent. (Items V, VI, VII and VIII.)

If the percentage increase in expense of administration, operation and maintenance had been the same as that of teachers' salaries, namely 121 per cent (Item V), then the total outgo in 1922 would have been \$1,978,189.52; the increase in total expense 179 per cent; and there would have been a *credit* balance in 1922 of \$168,878.70 (Item XXIV).

It is no uncommon thing for a business to be burdened, even swamped, by its "overhead." It is by no means impossible that the costs of administration, operation and maintenance at the Institute are excessive. Certainly it cannot be maintained that "wages" (the salaries of teachers) have increased disproportionately. Salaries have increased exactly in the same per cent, 121, as has income from students (Items III and V). The increase in average salary has been even less, 105 per cent (Item XIII; see also Item XIV), while the increase in average salary *per* the average number of students per teacher has been only 32 per cent (Item XVII; see also XVIII).

It is interesting to note that in the same interval of time (1917-1922). "the wages of the laborers [of the town of Brookline] show an increase . . . of 54 per cent to the \$4.25 rate now existing." No one will contend that the town laborer has increased in efficiency in any degree, yet if he works 300 days in the year he receives \$1,275, an amount more than half the average salary of an Institute teacher (Item XIII).

Very striking is the fact that the cost of teaching per student has increased 32 per cent (Item XX; see also XVII) while the cost per student for all expenses except teaching has increased 134 per cent. The cost per student for administration, operation and maintenance has increased 69 per cent (Item XXIII). In connection with this the statement in Item XXII should be carefully considered; namely, that in 1917 for every dollar spent for teaching there was spent for other expenses 73 cents; in 1922, \$1.20. The figures for administration, operation and maintenance are 64 and 82 cents respectively. (Item XXII.)

Certainly, in view of the facts cited, it is not true in the past five years that "all of the increase in cost per student figures in additional payment for instruction." On the contrary it would seem to be the excessive burden of administrative and operation costs, the "overhead," that is proving too heavy for the Institute.

The following figures, based on the Treasurer's reports of 1917 and 1922, are presented in the hope that they may receive careful study from the alumni and all others interested in the Institute.

I. Total expenses:

1917.....	\$708,655.13
1922.....	\$2,177,878.19
Increase.....	\$1,469,223.06 = 207 per cent
Total Income:	
1917.....	\$754,378.70
1922.....	\$2,147,068.22
Increase.....	\$1,392,689.52 = 185 per cent

II. Number of students:

1917.....	1,957
1922.....	3,436
Increase.....	1,479 = 76 per cent

III. Income from students:

1917.....	\$449,078.67
1922.....	\$994,513.12
Increase.....	\$545,434.45 = 121 per cent

IV. Income from students per student:

1917.....	\$229.47
1922.....	\$289.44
Increase.....	\$59.97 = 26 per cent

V. Salaries of teachers, all grades, and including bonus of 1922:

	1917	1922
Regular.....	\$391,288.51	\$864,517.13 (a)
Research.....	\$18,695.00	\$86,282.89 (b)
Total.....	\$409,983.51	\$950,800.02
Increase.....		\$540,816.51 = 132 per cent
Increase (a).....		\$473,228.62 = 121 per cent
Increase (b).....		\$67,587.89 = 362 per cent

VI. Administration costs:

1917.....	\$158,080.58
1922.....	\$395,803.17
Increase.....	\$237,722.59 = 150 per cent

This item includes "wages accessory to teaching" and "departmental supplies and repairs" which are a part of overhead expense and not of teachers' "wages."

Note: If the Division of Industrial Coöperation were included in the above, then

Increase.....	\$267,298.55 = 169 per cent
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VII. Operation and maintenance costs:

1917.....	\$104,000.14
1922.....	\$383,083.89
Increase.....	\$279,083.75 = 268 per cent

VIII. All expense except teachers' salaries:

1917.....	\$298,671.62
1922.....	\$1,227,078.17
Increase.....	\$928,406.55 = 311 per cent

IX. Number of teachers, all classes:

1917.....	331
1922.....	375
Increase.....	44 = 13 per cent

X. Ratio of students to teachers, or the number of students per teacher:

1917.....	5.91
1922.....	9.16
Increase.....	3.25 = 55 per cent

XI. Number of teachers, not including research and lecturers:	
1917.....	284
1922.....	327
Increase.....	43 = 15 per cent
(Compare Item II.)	
XII. Number of students per teacher, not including research and lecturers:	
1917.....	6.89
1922.....	10.51
Increase.....	3.62 = 53 per cent
XIII. Average salary, all grades of teachers:	
1917.....	\$1,238.62
1922.....	\$2,535.46
Increase.....	\$1,296.84 = 105 per cent
(See XVII.)	
XIV. Average salary of teachers, not including research and lecturers:	
1917.....	\$1,377.78
1922.....	\$2,643.78
Increase.....	\$1,266.00 = 92 per cent
(See XVIII.)	
XV. Income from students compared with salaries of teachers, all classes:	
1917.....	110 per cent
1922.....	105 per cent
XVI. The same as XV, excluding research and lecturers:	
1917.....	115 per cent
1922.....	115 per cent
Items XV and XVI show that the income from students more than pays the cost of teaching.	
XVII. Ratio of average salary to number of students per instructor:	
1917.....	$\frac{\$1,238.62}{5.91} = \209.58
1922.....	$\frac{\$2,535.46}{9.16} = \276.80
Increase.....	\$67.22 = 32 per cent
XVIII. The same as XVII, not including research and lecturers:	
1917.....	$\frac{\$1,377.78}{6.89} = \199.97
1922.....	$\frac{\$2,643.78}{10.51} = \251.55
Increase.....	\$51.58 = 26 per cent
Items XVII and XVIII are a measure of the teacher's betterment; increase of salary and increase of work both being taken into account.	
XIX. Income per student:	
1917.....	\$385.48
1922.....	\$624.87
Increase.....	\$239.39 = 62 per cent

XX. Cost per student for teaching, all classes of teachers:

1917.....	\$209.50
1922.....	\$276.72
Increase.....	\$67.22 = 32 per cent
(Compare Items XVII and XIX.)	

XXI. Cost per student, all expenses except teachers' salaries:

1917.....	\$152.67
1922.....	\$357.12
Increase.....	\$204.45 = 134 per cent
(Compare Items XX and XXIII.)	

XXII. Cost per student:

	(a) Teaching	(b) All Other Expense	Ratio (b) to (a)
1917.....	\$209.50	\$152.67	73 per cent
1922.....	276.72	\$331.90	120 per cent

(b) Administration
Operation and
Maintenance

	(a) Teaching	(See XXIII)	
1917.....	\$209.50	\$133.92	64 per cent
1922.....	\$276.72	\$226.68	82 per cent

That is, in 1917 } for every dollar spent for teaching there was
 1922 }
 spent 73 } cents for other expenses per student, and 64 } cents for
 120 } 82 }

administration, operation and maintenance.

XXIII. Cost per student, administration, operation and maintenance:

1917.....	\$133.92
1922.....	\$226.68
Increase.....	\$92.76 = 69 per cent
(Compare XX and XXI.)	

XXIV. Percentage increase for teachers' salaries (121 per cent) applied, instead of the actual percentage increase, to costs of administration, operation and maintenance, including wages accessory to teaching and department supplies, etc.

1917, costs of administration, etc.,	\$262,080.72,
add 121 per cent,	\$317,117.67, would give,
1922, costs of administration, etc.,	
Computed.....	\$579,198.39
Actual.....	\$778,887.06
Difference.....	\$199,688.67 (a)
Total expense, 1922.....	\$2,177,878.19
Deduct (a).....	199,688.67
	\$1,978,189.52

which would be the total expense, 1922.

Total income, 1922.....	\$2,147,068.22
Total expense (computed).....	1,978,189.52
Credit balance.....	\$168,878.70

ARTHUR D. LITTLE, '85

THE following slight sketch is designed to make better known to the alumni the achievements of the present president of the Association. The charm of his personality cannot be conveyed by any written words, but an outline of what he has done may be attempted.

His early education was obtained in the public schools of his home city, Portland, Maine, and at the age of twelve he had definitely decided to become a chemist. How this came about he told in an interesting anecdote which certainly bears repeating. He said, "One day at school the fellow who sat in front of me turned around and said that if I would give him ten cents he would show me some interesting experiments in chemistry. Well, I happened to have a dime, so after school we two went down town and bought five cents' worth of glass tubing and five cents' worth of sulphuric acid. With this under our arm, we went to my friend's house where he succeeded in setting up a hydrogen generator. As most kids do, we set it off too soon, and the result was a small explosion. This interested me most decidedly, and we tried it again with better success. Then I went home and told my father that I was going to be a chemist."

From the public high school Mr. Little went to the Berkeley School in New York where his teachers tried to turn his interest to medicine. But his mind was made up not to be changed. Still pursuing his chemical education, he entered Technology in the Class of 1885 in Course V. He served on *The Tech* in 1883 as an editor and in 1884 became editor-in-chief until he left the Institute and became a chemist in the Richmond Paper Company which had just established the first sulphite fiber mill in the country. Only a short time passed before he was made superintendent of this department and in two or three years became an expert in the chemistry of paper making.

From 1885 to 1886 he was engaged in starting other sulphite plants in Wisconsin and North Carolina. Later in 1886 he opened a commercial laboratory in Boston with R. B. Griffin which has developed into the present organization of Arthur D. Little, Inc., Chemists and Engineers. In the early stages of this partnership Mr. Little spent much of his time in patent litigation, testifying as an expert in nearly all important litigation based on chemical patents, but this did not satisfy his ambition. He then turned his efforts to his laboratory which he made the pioneer in introducing chemical methods of control of processes of chrome tanning, the manufacture of artificial soap from cellulose acetate, and the making of potassium chlorate.

In 1894 he published a book, "The Chemistry of Paper Making" in collaboration with Mr. Griffin. This book instantly became popular among chemists and created for Mr. Little a wide reputation. Since then he has published numerous articles on the utilization of industrial waste and co-ordinated use of natural resources.

Among the offices held by Mr. Little, the following are of particular interest: President of the American Chemical Society (1912-14), President of the American Institute of Chemical Engineers (1919), for a second term a member of the Corporation M. I. T., Chairman of the Visiting Committee of the Corporation M. I. T. on the departments of Chemistry and Chemical Engineering, President of the Alumni Association M. I. T., Chairman of the Committees on Conservation of Fuels and Conservation of National Resources of the International Chamber of Commerce, and a member of the American Academy of Arts and Sciences.

The University of Pittsburgh conferred the honorary degree of Doctor of Chemistry on him in 1918. It is interesting for us to note also that Mr. Little was influential in the founding of Course X-A, the School of Industrial Engineering Practice here at Technology.

During the war he closely coöperated with the Airplane Production Board and the Signal Corps in the manufacture of dopes for airplane wings and the development of a new process for acetone by fermentation. He was also connected with the Chemical Warfare Service and invented the "suck-on" filter for protection against toxic smokes which has now been regularly accepted by the army.

At the present time Arthur D. Little, Inc., has a laboratory which serves many of the largest corporations in the country in chemical engineering, in the operation of tests, and in all methods of industrial developments.

GIFTS TO DEAN BURTON

THE donation of a Ford sedan and a mahogany table with a silver plate to Alfred E. Burton, former Dean of Technology, from funds voluntarily contributed by the student body last spring, was formally approved at a regular meeting of the Institute Committee, held late in January.

The funds given by the students out of appreciation of the work of Dean Burton were turned over to the Institute Committee to be dispensed at its discretion. It was originally planned to present the former Dean with a library set, but, since he preferred a Ford sedan, the gift already mentioned was sent.

THE JANUARY COUNCIL MEETING

At the eighty-eighth meeting of the Alumni Council held at Walker Memorial on the evening of January 30 the chief topic of discussion was the proposed increase in the student tax for the better management of activities, particularly athletics. There was a large attendance and an unusually live and interesting meeting.

The salad oration was given by Mr. E. W. Rollins, '73, of New Hampshire, who extended to the Council an invitation to the annual meeting of the New Hampshire Club on the last Sunday of the coming June. When asked if all the old conditions of the outing, so dear to the hearts of Tech men, would be continued, Mr. Rollins replied merely, "You come down and find out!" which made Mr. Little, presiding, term Mr. Rollins' remarks, "an unusually satisfactory and comprehensive" salad oration.

Dr. A. W. Rowe then announced, to the great interest of the company, that at that moment the members of the Boston Athletic Association were voting on the proposition, already favorably recommended by its Executive Committee, to sell its boat house, near the Cottage Farm bridge to Technology. The Corporation had voted the money, and in the anticipation of a favorable verdict by the Boston Athletic Association members, plans were under way to remodel the house and make it convenient for varsity and intra-mural rowing and for gatherings of the various activities. Somewhat later in the evening word came over the telephone that the deal was completed by vote of the members interested and there was a short impromptu jubilation, with Dr. Rowe receiving many congratulations.

The chief routine business of the evening was the report of the nominating committee for term members of the Corporation, officers of the Council for next year, new representatives, etc. A nominating committee was also appointed for the Advisory Boards to Undergraduate Activities. Mr. Lobdell also made a report on the trust funds of the publications for the Advisory Committee of which he is a member.

Those appointed to the special Nominating Committee to present nominations for membership on the Undergraduate Advisory Council were: A. W. Rowe, '01, C. M. Spofford, '93, and D. G. Robbins, '07.

The nominees for term membership on the Corporation are: John L. Shortall, '87, Course IV; Frederick Metcalf, '90, Course II; William Robert Kales, '92, Course II; Frank William Lovejoy, '94, Course X; William Chapman Potter, '97, Course III; Lester D. Gardner, '98, Course IX. The nominating committee has as required, nominated six; the three names receiving the largest number of votes will be submitted to the Nominating Committee of the Corporation, as the nominations of the Alumni Association.

Mr. Brokaw, '22, then reported on the recent trip of the Musical

Clubs which proved to be so successful. It was the first trip since 1917, he said, and the longest and most successful ever undertaken. In Rochester the clubs played to an audience of six hundred, in Cleveland about the same; Nela Park was so pleased that three hundred dollars was pledged for a concert next year. The clubs also played in Akron, in Chicago — completely effacing the rather unfortunate impression of 1917 — in Rockford, in Schenectady, where the concert was carried off without any particular organization of alumni to back it. The trip was of great benefit to the students; they were entertained by the Kodak Company in Rochester, where there are many Tech men in the organization, and in Akron by the Firestone organization. The trip was perhaps of greater benefit to the alumni in the various centers, as it gave them an opportunity to get in touch again with the undergraduate point of view and to learn what is going on around the Institute.

The chief business of the evening was the presentation of the Undergraduate Committee report on raising the student tax, a summary of which will be found adjoining. Mr. Thomas M. Taylor presented the reasons for submitting the matter to the Council and the reasons for the increase asked. The principal need, of course, is for money for athletics, which can no longer be run on an insufficient budget and uncertain donations, as well as money for the other activities, which have increased greatly in number and scope since the first student tax was voted in 1917. There are now five publications, thirty-four teams, ten professional societies, not counting the Show and the Musical Clubs, all of which have branched out greatly of late. These activities contain 1831 men, over half the enrollment of the Institute (and a much greater proportion if one counts out the men from other colleges who are not interested primarily in Technology) the majority of whom, it has been proved, are doing well in their studies. The scholarship average of the whole school is 183, that of men engaged in activities, 190, figures which speak for themselves. The general standards of the school are higher than ever, it was pointed out, and the publicity Technology is receiving is much greater than ever before, a fact resulting largely from the interest taken in undergraduate activities, particularly athletics.

After Mr. Taylor had finished, President A. D. Little praised the report highly and then called on Mr. Macomber, who had analyzed the report for the Executive Committee. After four hours close and interested study, he was unable, he said, to offer any criticism as to the general proposition. He concurred heartily with President Little that the report was one which would be a credit to an engineer of experience. The one course for the Council to take, he insisted, was to accept it and cordially endorse its recommendations.

Dr. Rowe, in some supplementary remarks, pointed out the athletic activities of the Institute were being run on a budget of \$8,000 from the student tax, plus donations which amounted to about \$6,000, but which were uncertain and could not be counted on. This possible maximum of \$14,000 had to support 14 varsity and 20 minor teams.

In comparison with this Dr. Rowe noted that Yale University supported 36 teams on \$400,000. Furthermore, athletics at Massachusetts Institute of Technology were more nearly on an amateur basis than in any other college he knew [a statement borne out by the recent athletic "housecleaning" at Princeton and elsewhere. ED.]. Here men had to furnish their own equipment, sometimes their own transportation; they received no sweaters as gifts. Furthermore, he believed that the athletic men were much better fitted to stick out the long and hard course than others who had no participation in sports.

In connection with this Mr. Arthur Hopkins asked whether this increase in the tax of from nine to fifteen dollars per man would mean a real increase in the number of men reached by activities or merely more money for the same number of men as at present. Replying, Mr. Brokaw said that he believed it would mean a great increase in the number of men coming out for athletics and other activities, as there would be more incentive and the activities would not have to be so economical of their personnel.

Dean H. P. Talbot spoke briefly on the same subject, pointing out that the Corporation might be a bit reluctant to grant the increase because of the recent increases in charges for incidentals, which were absolutely necessary to meet increased costs, but which really amounted to an increased tuition, already the highest among institutions of higher education. These were laboratory fees for all departments, the greatly misunderstood \$5.00 fee for deficiencies and conditions, and the like. But now that, apparently, the entire student body understood the reasons for the proposed tax and were unanimous in favor of it, he was of the opinion that the proposed increase in the tax was certainly necessary and would be beneficial. Dr. Talbot praised the conduct of athletics at the Institute for their economy, cleanliness as well as their success, and paid a tribute to Dr. Rowe's unfailing fairness in his decisions. He felt, however, that money was particularly necessary for the class social organizations, which had to date been giving up the money apportioned to them in favor of athletics, because, although Massachusetts Institute of Technology does not, as some assert, lack college spirit, it is bottled up — partly because of lack of money for big meetings, mass meetings and All-Tech smokers, which are the best means of showing spirit and thereby creating it. With all the obvious difficulties, the lack of a president, the lack of free hours during the day, the scattering at five o'clock, anything which will foster spirit, as the activities do, is worthy of hearty endorsement.

To this Dr. Little added that prospective employers of Tech men were also keenly interested in activities, as being in their opinion, just as important to a man as his professional work.

The recommendations of the report were then read: that the student tax be called hereafter "Undergraduate Dues," that it be raised from \$9.00 to \$15.00 per man, to be distributed as follows: athletics, \$8.15; Walker Memorial, \$4.00; the Classes, \$.75; health, \$1.00; Institute Committee, \$.50; contingent, \$.60; total, \$15.00.

Mr. T. H. Skinner of the Central New York Club then told an interesting story of an aviation training field during the war that was averaging about a hundred per cent casualties, because of improper physical care on the part of the students learning to fly. After an athletic trainer was put in, with a training table, regular hours, etc., the casualties were reduced to one in six weeks. The same effect would be shown, he urged, in the intellectual progress of the students, their class work and home study, if they were put under conditions of athletic training, of hours and diet and smoking, and would undoubtedly prolong their active life in later years. In support of this remark another member of the Council urged heatedly that the afternoons during term time should be given up entirely to athletics, with credit given towards the diploma for athletic work, a proposition at which the members of the faculty present smiled somewhat weary smiles.

The debate, continually mounting in interest and liveliness, turned to the question of publication, in an effort to make the report known to all Technology graduates interested in the matter, that they might bring the proposals personally to the attention of the Corporation as something which had a strong alumni backing. Mr. Hopkins moved that the matter be given publicity in the *REVIEW* and Mr. Macomber moved that at least a digest or summary be printed in pamphlet form for distribution. Both motions were carried, and Mr. Rollins, already well and favorably known for his generous invitation at the beginning of the evening, crowned the work (as the w. k. Publius Virgilius Maro used to remark) by offering \$200 to defray the costs of printing. (This pamphlet has since been printed and distributed where it will do the most good among those connected with Technology and will be sent to other institutions facing similar problems.)

It was at this point, at about 9.55 p.m., that the telephone message regarding the completed sale of the boat house was received, with results noted earlier in this account. After the interruption the meeting turned to other matters. Mr. Don Carpenter, president of the senior class, reported that the class had voted to approve the proposed plan to carry on an intensive campaign to secure memberships in the Alumni Association during the spring and would carry out the project as actively as possible.

Mr. A. J. Browning of *The Tech* reported on his committee's work to secure a new song for Technology, urged alumni coöperation, and asked the Council to come in as one of the donors of the annual prize of \$200, to the extent of \$50. This was voted and Dr. A. W. Rowe appointed the representative of the Council on this committee.

Dr. Little then reported, in the absence of Merton L. Emerson, Chairman of the Committee on Alumni Director, who unfortunately was ill, that there was widespread interest but no results. Dr. Little recapitulated his specifications of an Alumni Director, as given at the January annual dinner, and said that the committee had faced great difficulties in getting on the track of such a man who must, after all, be able to hold his own with the president of the Institute.

In the desultory debate which followed the report of progress Mr. Allen asked whether it might not be possible to get an organizing type of man for, say, five years, to do the preliminary and immediately necessary work, after which it was perfectly possible that another type of man might be better suited to the position.

The last bit of business presented was a letter from the M. I. T. Club of Central New York, presented by Mr. Skinner, to the effect that the Club believed in getting a high-class, high-salaried man for the position and was willing to assess its members a dollar a year to help pay his salary. Furthermore, the Club was willing to pay the expenses of a speaker from the Institute, provided one might be sent who was alive and interesting and well informed.

As the usual hour for adjournment was considerably past, unnoticed in the course of an unusually spirited and effective meeting, the Council then adjourned.

THE MARCH COUNCIL MEETING

THE eighty-ninth meeting of the Alumni Council was held on Monday, March 27, as a joint meeting with the Faculty Club. About one hundred were present and listened to a discussion by Dean Wallace B. Donham of the Harvard Graduate School of Business Administration and Prof. Henry T. Moore of Dartmouth. The topic of discussion was the results of psychological tests. In particular, attention was given to their use in conjunction with entrance and other college examinations.

There were also present representatives from Boston University and Tufts College, who with members of the Faculty and of the Council after the formal discussion joined in an informal discussion. During Professor Moore's talk he circulated test papers which had been given at Dartmouth, and those present took the examination with interesting results.

NOMINATIONS FOR CORPORATION TERM MEMBERS

In the annual ballot for the election of alumni term members on the corporation, sent out to the members of the Alumni Association, the Nominating Committee submitted six names. The three receiving the most votes were returned to the Nominating Committee of the Corporation, as the choice of the Alumni Association. Only members whose class has been graduated five years may vote for these nominees, while all members may vote for the officers of the Association.

Additional ballots were sent to members of classes whose numerals end in 3 or 8, for the election of a class representative on the Council for five years. These classes are now represented by the following who are also nominees: 1868—Robert H. Richards; 1873—none; 1878—E. P. Collier; 1883—Horace B. Gale; 1888—John C. Runkle; 1893—George B. Glidden; 1898—Elliott R. Barker; 1903—T. E. Sears; 1908—H. T. Gerrish; 1913—W. R. Mattson; 1918—Robert E. VanKirk.

The following were the nominees for the office of alumni term members of the Corporation:

JOHN L. SHORTALL, '87, a graduate of Course IV, is now a member of the firm Shortall & Murison, lawyers, of Chicago. Shortly after graduation he took up the study of law and was admitted to the Bar of Illinois in 1891. He has practised law in Chicago since. He is a member of many legal associations and social clubs. He is chairman of the Law Department and vice-president of the Illinois Humane Society. He is one of the founders of the Northwestern Association of M. I. T., the present Technology Club of Chicago and acted as president during 1908 and 1909. He has been a member of the Executive Committee, is now a Trustee of the Class of '87 Fund and a Sustaining Member of the Alumni Association.

FREDERICK METCALF, '90, a graduate of Course II, is at present treasurer of The Chase Machine Co., Cleveland, Ohio, engineers and machinists. He was employed as draftsman with the American Windlass Co., and later became treasurer. He held this position till 1899, when he took up his present position. He is an officer in other engineering firms in Chicago and Cleveland and is a member of the Ohio State Board of Commerce, the Cleveland Chamber of Commerce and other organizations. He is a Sustaining Member of the Alumni Association.

WILLIAM R. KALES, '92, a graduate of Course II, is vice-president and engineer of the Whitehead & Kales Company, Detroit, Michigan, and president of the Kales Stamping Company of the same city. Before taking up his present positions he was employed at designing and installing steam engines with various firms. He was Public Lighting Commissioner in Detroit from 1906 to 1912.

In 1918 he took charge of the manufacture of steel hangars for the United States Air Service. Given a captaincy he was with the Fourth

Air Park in First Pursuit Group of Air Service until the armistice. He was with the Army of Occupation until September, 1919. He is associated with the Detroit Technology Association, the Tech Club of New York, and The Old Tech Club of Boston. He is prominent as a member of many societies in Michigan. He is a member of the Sigma Xi Fraternity and a sustaining member of the Alumni Association; in his senior year he was president of his class.

FRANK W. LOVEJOY, '94, of Course X, is vice-president of the Eastman Kodak Company. After graduation he was employed as chemist with the Cinclare Central Factory of Louisiana and later with Curtis, Davis & Company at Cambridge in a similar capacity. He has held his present position since 1897. Mr. Lovejoy served as a member of the Committee on the Mobilization of Technology's Resources, and as regional chairman of the Rochester District during the Endowment Fund Campaign. He has been a vice-president of the Alumni Association since June, 1920.

WILLIAM C. POTTER, '97, of Course III, is at present president of the Guaranty Trust Company of New York. He has been employed as mining engineer, general manager, and officer of many firms in Colorado, Montana, and California. He is a member of various clubs in New York City. Mr. Potter has served as chief of the Equipment Division of the Signal Corps, U. S. A. He is a member also of the New York Technology Club, and was formerly a member of the finance committee.

LESTER D. GARDNER, '98, of Course X, is now president of the Gardner, Moffat Company, Inc., of New York City. After graduation he became a post-graduate student in administrative law at Columbia University. Later he was employed on the staff of the *New York Sun*, *New York Mail*, *Collier's Weekly*, and other papers. As president of the Gardner, Moffat Co., he is editor of *The Rubber Age*, *Tire Trade Journal*, and other publications. He was a member of the First Training Regiment at Plattsburg and became a major in the Air Service. He is a prominent member of many societies in New York and Washington. In 1913 Mr. Gardner organized The Technology Clubs Associated. He has displayed a deep interest in Technology affairs since graduation.

THE REPORT ON THE STUDENT TAX REVISION

THE presentation of the report of the undergraduate committee on increasing the student tax, when presented to the Alumni Council at its January meeting, roused such enthusiasm, as may be seen from the report of the meeting on another page, that it was voted that the REVIEW give a résumé, at least, of the report, for the benefit of all Tech men, in order that, first, there might be a well-informed public opinion on the subject, and that, second, the alumni might have a chance to hear about a piece of undergraduate work which, according to President A. D. Little and Mr. Macomber of the Executive Committee of the Council, was a piece of work which any practising engineer might be proud to sign.

Since that meeting, as a result of a vote that evening and largely through the generosity of Mr. E. W. Rollins, '71, a pamphlet of forty pages abstracting the report has been prepared for the Corporation, whose members must ultimately pass on the question, for the Council, and, particularly, for other institutions facing the same problems. This abstract is, in itself, an excellent piece of work, giving in clear, forcible and concise form the essential facts and arguments for raising the student tax from the present assessment of \$9 a head ultimately to \$15, after one transition year of \$12.

The committee, consisting of Thomas Madison Taylor, chairman, Joseph Charles Patty, Albert Jesse Browning, and Forest Graves Harmon, turned out a long and carefully documented report the scope of which may be seen from the prefatory note to the abstract:

It is believed that, if the published report is to be widely read by busy men, it must be, first of all, brief and succinct. The significant feature of the original report is that every statement and every fact is backed up by substantiating evidence in the appendices. This section of the report is, therefore, too voluminous for publication and had to be practically eliminated. Certain budgets and charts were moved up from the appendices to the body of the revised report and the letters from the heads of the professional courses and a summary of proposals and changes alone constitute the appendix of this version. To be fair to the student investigators who made up the original report, a résumé of their comprehensive and convincing data in the appendices of their manuscript is given below.

The original appendices are separately bound in a volume of two hundred and twenty-three pages, containing the original undergraduate report of fifty-two pages of the Committee on Ways and Means 1917 verbatim, which was submitted to the Alumni Advisory Council on Undergraduate Finances. The latter's replying report with the undergraduates' rebuttal is also included verbatim, comprising twenty pages. The result of these reports is shown in a photostat copy of bulletin issued by the Institute, which promulgated the first student tax. Another photostat of President MacLaurin's letter increasing the tax from \$8 to \$9 is included. Along with these is the report of thirteen pages of the undergraduates submitted to the Executive Committee of the Corporation in the summer of 1921, which was not approved.

The second main section of the appendices consists of nine pages of tabulation of the expenditures of the student tax since 1917, with reports of the Budget Committee covering this period. Twenty-one pages are devoted to data on the scope and breadth

of activities with three letters from their heads, including tabulations of the number of men engaged in each activity and of publicity given to the Institute through its undergraduate work. This also includes five letters from prominent heads of courses explaining the attitude of the faculty towards activity and giving some pointers on their benefits. A report by the Registrar of the Institute of the scholastic standing of the various activities in relation to the average standing of the whole school. The athletics section comprises forty-two pages containing charts, letters, statements of income and disbursements, thirty pages of summarized budgets of athletic teams, condensed from about one hundred and thirty pages of detailed budgets made out by the various team managers. Also this committee's proposed detailed budget showing how the proposed increase could be expeditiously employed. The Walker Memorial section consists of letters, the treasurer's report, with an analysis of it in connection with an analysis of the floor space. The Health Insurance section comprises charts and letters. The Institute Committee and class section contain charts, letters and budgets comprising ten pages.

The third main section of the appendices gives letters and extracts of committee meetings showing the authorization of this committee; letters and reports from class secretaries giving the results of the class representative meetings, fifteen pages. The last seventeen pages are devoted to the publicity obtained during the campaign to get the register of student opinion.

The reason for this increase from \$9 to \$15 in the tax, which goes to take care of most of the expenses of undergraduate activities, is that since 1917, when the original tax was adopted, the growth in the numbers of the Institute and the consequent, but far larger proportional growth in activities, especially in athletics, has rendered the present amount totally inadequate both with reference to rising costs and to increasing demands.

The present activities in the student body consist of five publications, thirty-four athletic teams, ten professional societies, Tech Show, the Musical Clubs, the four class executive bodies and the Institute Committee, with a total membership of 1,831. The combined expenditures of these organizations exceeded \$125,000 in the year 1920-21. By these organizations, more than 100,000 papers, books and periodicals were published. One hundred and eighty-nine meets were held in which 375 men competed and which were observed by approximately 70,000 people. Seventy-five professional society meetings were held, student attendance at some of which exceeded 1,000. Five performances of Tech Show were held to a total audience of 10,000, and the Musical Clubs played at 20 concerts and dances, attended by approximately 12,000 people.

As a result of these activities the Institute has received much favorable publicity and it is estimated that from this source alone the Institute received during the past year more than twenty-seven thousand and three hundred inches of space in Boston newspapers! It should be said also that a statistical report from the registrar's office shows that for the past year the average standing of activity men was rated at 190 compared to the average rating of the student body at 183 — which seems to show that at Technology, at least, participation in activities is a real asset, rather than a liability to the intellectual life.

The original 1917 tax of \$8 was later raised to \$9 and apportioned as follows: \$4 to the Walker Memorial, \$2.50 to athletics, \$1 to the Health Service, 17 cents to the Institute Committee, 73 cents to the classes, and 60 cents for reserve and contingent. Although it has proved markedly insufficient, there is no doubt that the principle underlying it is sound; as a substitute for a heterogeneous mess of dues, benefits, contributions, drives and collections of various sorts, all

uncertain and difficult to collect, the student tax has proved itself, in the opinion of everyone connected with it, the only just, secure and economical way to raise money for the undergraduate activities, which, one hopes, will soon include a far larger number of men than is at present possible.

The recommendations for the new tax, to be called Undergraduate Dues hereafter, are:

1. That the student tax be increased from \$9 to \$12 for the year 1922-1923 and from \$12 to \$15 for the following years, this change to affect all classes simultaneously.

2. That the tax be apportioned approximately as follows:

	1922-23	1923-24, etc.
Athletics.....	\$5.30	\$8.15
Walker Memorial.....	4.00	4.00
Health Insurance.....	1.00	1.00
Classes.....	.74	.75
Reserve and Contingent.....	.60	.60
Institute Committee.....	.36	.50
Yearly Total.....	\$12.00	\$15.00

3. That the name student tax be discontinued and that dues to the Undergraduate Association be employed in its stead; furthermore, that the receipt for payment of these dues, issued by the Bursar of the Institute, have printed conspicuously upon it the amount and apportionment of the dues among the various funds.

4. That other regulations in regard to these dues remain as in force at the present time.

It will be noted that the apportionment for the Walker Memorial remains the same as before, the committee having found, on computing the total area required for the student body in the building, as compared with that devoted to other and special uses, the present four-dollar apportionment will take care of more than a just proportion of the present expense. The health insurance remains the same, also, since the Institute is required by law to maintain a first aid station, which accounts for a good deal of the cost. It is hoped in the future, however, that the tax for Walker may be met in part by a larger endowment and that the tax for the medical service may be increased. The tax for the Institute Committee is tripled, a necessary step to any one who knows the great increase in personnel and responsibility of the committee in recent years. It is the court of last appeal in many respects; it initiates many movements and leaves them to the various activities to carry out; it exercises a careful oversight on all financial activities of the various organizations, and particularly the work of its budget and auditing committees are of such scope and importance as to need considerable increase in funds. The increase in the apportionment for the classes is not large, but what is important is that in the past the classes have seriously curtailed their activities in order to turn over the money due them to the depleted athletics treasury, leaving little surplus for expenses for those activities, so needed at Massachusetts Institute of Technology, which serve to bring together members of large and scattered classes and create a class spirit which is one of the greatest essentials in the larger college spirit of our American institutions.

The chief increase, therefore, is for the athletic budget. From \$2.50 to \$8.15 per man in an institution of thirty-five hundred may seem a great increase, but no one can doubt that it will do little more than take care of, in a fairly adequate way, the rapidly growing needs of our athletic life. The main part of the digest, therefore, consists of the arguments of Dr. Allan Rowe, chairman of the Advisory Committee on Athletics, with the statistics which back up his contentions. These have been rehearsed so much that it is not necessary to give them in detail. Suffice it to say that since 1917 the five teams then existing have increased to fourteen varsity teams and twenty class teams, with a total of 1,671 candidates, 189 meets with 79 different schools, before a total estimated attendance of sixty-seven thousand people. It must be remembered that Technology makes almost nothing from gate receipts, that it has no largely attended football games, and that it has been getting along on a student tax apportionment of \$2.50 while the average athletic tax in other colleges is \$11, with taxes as high as \$20 at Columbia and Amherst.

In 1920-21 the Institute athletic expenditures were \$14,000, a large part of which, above the tax and \$1,440.61 gate receipts, being contributed by the undergraduate classes from their tax funds and by the profit-making activities such as Tech Show, the publications and so forth, all generous, but insufficient and uncertain sources of supply. With this money Technology last year maintained nearly as large a crew squad as Cornell with a registration of 5,000 students; with \$14,000 Technology maintained almost as many teams as cost Yale University \$400,000 (see January Council Meeting); and it must be remembered that Technology gives no sweaters, little equipment, that the men bear a far larger portion of their individual expenses than is required in other colleges, and that, although Technology puts out teams more for the benefit of the men on them and for the health of the undergraduate body as a whole than for marked success before the public (winning teams, etc.) nevertheless, the record of Tech for the last few years as to winning teams, clean, fast sport, and growing public and newspaper interest is one that justifies making every effort to give the athletic control sufficient money to run these sports on something better than a shoestring basis and to increase the opportunities in sports for the entire undergraduate body.

The method of putting the question before the student body and getting a practically unanimous approval, before submitting it to the Council and the Corporation, is interesting as showing the methods of undergraduate government.

In considering the whole field of the revision of the student tax, this committee has considered carefully the attitude of the student body towards such an increase. Even though such an increase would be highly desirable and almost imperative, it would probably not be feasible to go ahead with it if it were to meet with definite opposition in the student body. This committee has considered how an adequate consensus of opinion might be obtained. It was not thought advisable to take a general student referendum or to call class meetings. Experience has shown that an attempted referendum of the entire student body would probably result in a very small vote, even though exten-

sive and elaborate publicity methods were used. Experience has also shown that a class meeting, if called, would probably produce no better results. In such a meeting, a brief discussion would take place, a motion could be made and passed, and the vote might mean little. Furthermore, such a meeting could be packed by men who wanted to push or oppose the student tax and for this reason, the vote obtained would be very uncertain.

The method of obtaining a register of student body opinion was as follows:

In the case of the upper classes which have no student-council organization, committees were elected from the recitation sections, one man for every thirty-five in the section. These committees met and carefully discussed the whole student tax situation. At these meetings, one or more members of this committee explained the student tax proposition at length and endeavored to bring an unbiased opinion before the committees. Every attempt was made to make the committees deliberative assemblies. Votes were only taken after impressing the fact upon the men that they were representatives of their sections and that they should not cast their ballots without considering what their sections would expect of them. The members had previously canvassed their sections, or if they had not, the meeting was adjourned and another meeting called at a later time for taking the results of the canvass.

This committee believes that the results which were obtained are valid and honest expressions of the opinions of the student body, regarding the proposed increase. In every case, the vote obtained was unanimously in favor of the increase.

Besides this line-up on the part of the students (facilitated greatly by the publicity given in an excellent series of editorials and statistics on the front page of the *Tech* for many weeks) the report also contains letters from heads of the largest courses in the Institute, almost all of whom come out plainly in favor of student activities and testify to the good they do.

These furnish the final arguments for the increase as an absolute essential to the developing life of the Institute. The obvious thing to do, therefore, as most of the progressive members of the student body, faculty, Alumni Council and Corporation seem to think, is to get this passed, get the student body all lined up, interested, active and participating in our undergraduate life — and then seize the opportunity to start the drive for dormitories as essential — and missing — centers for that life. That, as Mr. Kipling used to say, is another story — but not so awfully other, at that!

R. E. R.

ARMY COMMISSION FOR PROFESSOR MILLER

PROF. EDWARD F. MILLER, head of the department of Mechanical Engineering at M. I. T., has been made a colonel in the Ordnance Reserve Corps, United States Army, in recognition of the work he did for the Government during the war. Professor Miller invented the steam-driven tank which was later replaced by gasoline-driven tanks, and he organized many schools for training marine engineers under the Shipping Board.

THE LITTLE BILL FOR THE NEW TECHNOLOGY BRIDGE

House No. 1151

ACCOMPANYING the petition of Arthur D. Little relative to the construction of a war memorial bridge connecting Boston and Cambridge at Massachusetts avenue. Military Affairs. January 20.

THE COMMONWEALTH OF MASSACHUSETTS.

In the Year One Thousand Nine Hundred and Twenty-Two.

RESOLVE

Providing for the Construction of a Memorial Bridge across the Charles River Basin at Massachusetts Avenue in the City of Boston.

1 *Resolved*, That the governor, with the consent of the council,
2 appoint a commission, to consist of three citizens of the Common-
3 wealth, who shall investigate and consider the advisability of erecting
4 a new bridge over the Charles river basin at Massachusetts avenue,
5 said bridge to be forever maintained by the commonwealth as a
6 war memorial. The design of said bridge, together with its
7 approaches, shall include such memorial features and accessories
8 as shall render the whole an appropriate memorial, expressive of
9 its purpose and befitting the dignity of the commonwealth. Said
10 commission is empowered and instructed to inform itself fully
11 regarding the specific character of its task, to consult authorities,
12 employ assistants, procure designs, models, plans, specifications,
13 estimates and proposals, and do whatever may be necessary, in
14 its judgment, to enable it to report a comprehensive and definite
15 program for the erection and completion of the memorial; the
16 report shall be accompanied by drawings showing the complete
17 design, and careful estimates of all costs. The commission may
18 expend a sum not exceeding one hundred thousand dollars to defray
19 the expenses herein authorized. The members of the commission
20 shall serve without compensation.

THE TECHNOLOGY COLORS AND THE CLASS OF '77

THE old controversy about the origin of the Tech colors has been revived by a recent statement that the Institute owes them to the class of '79. The classes of '76 and '78 long ago made their claim and the class of '77, Richard A. Hale, secretary, has always affirmed that his class was the first to adopt them. Several years ago Mr. Hale furnished the REVIEW with the facts on the subject but the article was never printed. The REVIEW is glad to print '77's story now in order that the class may have its day in court.

According to Mr. Hale, the question of the colors, in which Dr. MacLaurin was at one time interested through the presentation to him of the facts by Prof. Cecil Peabody, '77, was to be decided by a conference of the class secretaries of '76, '77, and '78, but that conference was never held and both Mr. Freeman of '76 and Mr. Gooding of '78 published their respective claims separately. Since Mr. Hale professes himself absolutely sure of the ground on which the claim is based, he offers the following facts:

The first document is a reprint of the class records of '77. On February 29, 1876, the record states, a committee of three, Messrs. Chamberlain, Jenney and Hardman, were appointed to confer with committees from the first, second and fourth years on the subject of Institute colors. On March 14, 1876 that committee reported, and the colors (cardinal red and silver gray) were accepted by the class. The next year, February 21, 1877, at a class meeting the same colors committee was ordered to confer again with the classes of the first, second and third years to have the colors adopted the preceding year by '77 adopted by the whole school. Mr. Hale adds in a note "the above records are given as showing that the class of '77 originated the scheme of the Institute color and by conferring with the other classes the present color was adopted. The memory of the colors committee is very clear in connection with the above records as to the color being adopted."

Mr. Hale next appends a letter from John E. Hardman, president of the class in its senior year, confirming the records and adding that, although the class of '77 during its junior year conferred with men from '76, "there was absolutely no recognition of Institute colors before '77 became seniors and then the matter was submitted to the three classes below us and received their approval. There is, therefore, absolutely no question but that '77 established the Institute's colors; prior to '76 the Institute had no athletic teams nor any conspicuous occasion upon which colors were required. I am sure that you are absolutely correct in making the statement that the Institute's colors originated with and were established by the class of '77."

Mr. Hardman also says that the color cardinal (red and black)

was chosen instead of a proposed crimson (red and blue) because the latter was Harvard's color. A single color was found to be impossible, so on the suggestion of George J. Baldwin a silver gray was added. As Mr. Hardman at the time of writing was the only surviving member of the colors committee, his testimony is, naturally, important.

According to a statement by C. H. Peabody, '77, then head of Course XIII, made before the committee on faculty business in 1916, the first use of the colors chosen by the class of '77 was at the Philadelphia Centennial Exposition of 1876, when the student battalion gave an exhibition there and wore the now famous cardinal and gray selected by the '77 committee mentioned above. "And so one class ('77) really settled the question for all time, whatever other people have supposed they were doing."

Here endeth the testimony of the class of '77, Richard A. Hale, John E. Hardman and Cecil H. Peabody, all attesting and agreeing on the essentials.

R. E. R.

TECH MEN AT CONFERENCE ON PUBLIC HEALTH

THE most notable conference on public health was held in Washington, March 14 and 15, 1922, at the American Red Cross Building, under the auspices of the United States Public Health Service. The subject was the future of public health in this country and the education of sanitarians. A number of M. I. T. graduates were invited as members of the conference, and read papers, delivered addresses or discussed the various subjects. They included Prof. C. E. A. Winslow, '98, of Yale; Prof. E. O. Jordan, '88, of the University of Chicago; Prof. G. C. Whipple, '89, of Harvard; Prof. C. E. Turner, '17, of M. I. T.; Dr. W. H. Brown, '15, of the National Child Health Council; Dr. M. Knowlton, '18, of the United States Public Health Service; A. W. Hedrich, '17, of the American Public Health Association; E. Stuart, '10, and H. N. Calver, '14, of the American Red Cross; Dr. D. B. Armstrong, '13, and James A. Tobey, '15, of the National Health Council. A number of references were made to the late Prof. W. T. Sedgwick as the leader of public health of his day.—J. A. TOBEY, *Secretary, Washington, D. C., Club.*

JOHN R. FREEMAN ELECTED AMERICAN SOCIETY OF CIVIL ENGINEERS PRESIDENT

Internationally known for hydraulic investigations — has been
Vice-President and Director

PROFESSIONAL activities of John R. Freeman, new president of the American Society of Civil Engineers, have been international in character for many years. There are few members of the American Society of Civil Engineers, or the American Society of Mechanical Engineers (which organization he has also served in executive capacities), who are not familiar at least with Mr. Freeman's general professional career, particularly in the field of water supply and fire protection. He has been a prominent figure in the society for years, and served as a director in 1896-98, and as vice-president in 1902-3. He has twice been awarded the Norman medal, once for a paper relating to the hydraulics of fire streams, and the other time for a paper on the nozzle as an accurate water meter. He has been a member of the society since 1889, though seven years prior to that date he was connected with it as a junior.

Mr. Freeman was born in West Bridgton, Me., July 27, 1855. His early days were spent on the farm and his education was begun in the district school of that place. This education was supplemented by terms in the public schools of Portland, Me., and Lawrence, Mass. Later he entered the Massachusetts Institute of Technology, from which institution he was graduated in 1876. During his summers both in high school and college he was employed in various engineering capacities with the Lawrence Water Power Co. After graduation he joined the staff of the company regularly and soon rose to the position of principal assistant to Hiram F. Mills, chief engineer.

Increased responsibilities were placed upon him by his employer and after a few years he undertook engineering design on his own responsibility. The fact that he had charge of daily measurements of the water power used by the Lawrence factories and of water-power measurements for the factories in Manchester, N. H., gave him the intimate knowledge of stream flow and of gaging which has proved of much value to him. After ten years' experience, he opened a consulting office in Boston.

While this step was being considered he accepted the offer of the Factory Mutual Fire Insurance Co., to be its inspector and hydraulic engineer. Thus was his entry into the insurance field in which he has remained since, although not to the exclusion of other business and engineering enterprise. In such work his experiments on the discharge of fire nozzles and the hydraulics of fire streams came to be accepted as standards in that field of engineering investigation. Mr. Freeman sought particularly to perfect standard methods and appliances for

fire protection and to unite manufacturers of fire appliances on certain standards of quality while preserving to each his individuality of detail. The specifications almost universally adopted for underwriter fire pumps, underwriter nozzles, fire hose and the like, were drawn up by him after much experimental work.

Such investigations and activities led to his being made president and treasurer of the Manufacturers', Rhode Island and Mechanics Mutual Fire Insurance Co. in 1896, and several years later he was put in charge of fire protection and insurance interests of property valued at more than three hundred million dollars, making his office the largest of its kind.

In his consulting capacities, he served well the New York Board of Water Supply, being appointed not only its first consulting engineer, but its first employee. One of his outstanding achievements was his report upon the water-supply resources of New York City in 1899, being selected by Comptroller Coler of New York as an engineer familiar with large water supplies and unbiased by local prejudice. The request to submit such a report was received by Mr. Freeman in August, 1899, and the report was handed to Mr. Coler seven months later. In its printed form it was a book containing about six hundred pages largely illustrated and was generally acknowledged to be the most elaborate water-works report ever prepared by one engineer.

Hardly less interesting as a piece of engineering literature is his report submitted as chief engineer of the committee appointed in 1901 to consider the advisability of constructing a dam across the tidal estuary of the Charles River between Boston and Cambridge for forming a large water park. The report of these studies was a book also of about six hundred pages, invaluable to engineers who desire to investigate the subject of such work for improving the condition of tidal inlets. A further water-works achievement was his connection with the joint investigation made for the additional water supply for the City of New York.

Mr. Freeman has also served in a consulting capacity for various cities scattered all over the United States. His foreign activities have carried him to China and elsewhere. His most recent foreign work was consultant in the modernization of the grand canal in China. For a number of years he served as consulting engineer with the Board of Water Supply of the City of New York, (having been appointed to that position in 1905), and also has been engaged as consultant on water-power investigations for the New York State Water Supply Commission, on the Isthmian Canal lock and dam and on the San Francisco water supply, etc.

Besides being a member of the American Society of Civil Engineers, and the American Society of Mechanical Engineers, he is a member of the Boston Society of Civil Engineers and numerous other engineering organizations. He maintains a consulting office in Providence, R. I., and is president of the Manufacturers' Mutual Fire Insurance Co. of that city. — *Engineering News Record*.

REMARKS OF JOHN R. FREEMAN, '76

At Technology Alumni banquet, City Club, Washington, D. C.,
Thursday evening, February 2, 1922

SEVERAL subjects have been suggested for my remarks this evening — that I might talk on certain interesting problems of hydraulic engineering; or perhaps of my experiences in China; or of observations made last summer in England and France while a member of the delegation which carried over the felicitations of the National Engineering Societies of America to the National Societies of England and France; or things seen with the French Engineers on excursion to the new hydro-electric and industrial developments in the French Alps and to the grand harbor development project of Marseilles.

In this Technology atmosphere it may be more useful to talk about Technology; and the thought that it is nearly fifty years since I began my student days at Technology has put me in a reminiscent mood. Also I have long had some ideas on education which it may now be of interest to discuss.

For about twenty-five years I have been a member of the Technology Corporation; I have known personally, with some intimacy, each President from Rogers to Maclaurin, and for many years after graduation, until they retired or died off, certain prominent members of the Faculty were among my most intimate friends. On two occasions, years ago, I came near being a college professor myself, but some weakness of fiber permitted fears of poverty in old age to frighten me away from these delightful Groves of Academus.

When I entered Technology, nearly fifty years ago, in 1872, there were less than one-tenth of the present students; yet our class, which was larger than any of the ten following years, so overcrowded its laboratories that we were most unmercifully plucked at the end of the first semi-annual. We all thought we were terribly driven and that we had to study terribly hard, but my four sons who graduated one after another, about forty years later, have looked over my textbooks and my file of old examination papers and intimated that I was extremely fortunate in completing my school days before all of these new and difficult scientific matters had been discovered. But they, and perhaps some of you, have some wrong notions about progress in the science of civil engineering in the past forty or fifty years, and how it has come about.

True, these have been the most wonderful fifty years in the history of the world. The birth of the science of bacteriology; the marvels of physical chemistry; the application of electricity to the service of man in light, power, transportation and telephony; the development

of the internal combustion engine; aviation; and perhaps the greatest marvel of all, the electron-tube and long-distance wireless telephony, — all have come into being since my student days at Technology.

Tennyson says:

“Better fifty years of Europe
Than a cycle of Cathay.”

But let us not lose our perspective and forget that some things were done pretty well even in old Cathay. I should like to tell you about some of the great ancient engineering works that I have seen there; of the great stone sea wall built wonderfully well hundreds of years ago, 30 feet tall and said to extend 50 miles along the coast easterly from Hangchow; of The Great Wall that crosses from mountain top to mountain top along the Mongolian border; of the Grand Canal begun five hundred years B.C.; of the marvellous ancient bronzes and beautiful pottery hundreds of years old — but that is another story.

At Technology, we were given evidence that a good deal of wisdom had been accumulated fifty years ago, and my reminiscent thought in reviewing present conditions and certain lines of progress in the past has led me to ask if our technical schools today are putting their chief efforts on the line that will lead our graduates fastest and farthest in the next fifty years.

I have been thinking that this wonderful progress of the past fifty years has had for its mainspring the alert observer and the dreamer or visionary rather than the mathematician, and I am wondering if, in the years to come, we can do more than we have been doing in the technical school toward developing quickness and clearness of observation and if we can awaken more of inventive vision in the undergraduate. The progress in civil engineering in the past forty or fifty years has resulted from the civil engineer's seeing and using the discoveries of chemist, physicist and biologist; from broader horizon and from systematic ingenuity.

Looking back to my own student days there has been no great improvement from those wonderful books of Rankine that marked the beginning of a new epoch in the mathematical training of the civil and mechanical engineer and which were so complete in their theories of mechanics applied to practical every-day problems and in the elegance and brevity of treatment that a young engineer of today might be trained almost exclusively from those books in proper hands and go out into the world and practise civil and mechanical engineering without danger to the public or serious loss of profit to his employer.

Speaking of Rankine, it was hard for us young students to believe that he was human, until Prof. Sterry Hunt who had known him personally told us that Rankine also wrote jokes for *Punch* and was the author of verses written to prove that mathematical formulas could express even human emotions:

“Let X denote beauty; Y , manners, well bred;
 Z fortune, this last is essential;
 Then love is a function of XY and Z
 Of the kind that is known as potential.”

Why, oh why, did not Rankine mix some of these lines of lighter vein into his pages of Applied Mechanics?

It is interesting to note that Rankine, in his epoch-making book of fifty years ago, “The Steam Engine and Other Prime Movers,” after polishing off beautifully the theories of thermodynamics, stopped where the internal combustion engine and the “Liberty” motor were far beyond his ken, and that he dismissed electric power in one short paragraph as practically hopeless commercially by reason of high cost; because the electric current of those days came from expensive chemical reaction and the theory of its derivation from mechanical energy by revolving armatures cutting lines of magnetic force was yet to be worked out.

We had some great teachers at Technology in those old days. President Runkle was one of the most accomplished men of his time in the field of pure mathematics, with such lucidity of demonstration that those taught by him said it was a great mistake to have ever placed him in the President’s chair. A great mathematician or a great researcher does not, because of those qualities, necessarily make a great college President, although also the kindest and most earnest of men.

E. C. Pickering, who for thirty years afterwards directed the Harvard Observatory, was then our head professor of physics and with President Rogers was, I believe, the earliest in America to have the vision and courage to let large classes take these delicate instruments of the physical laboratory into their own hands. Until Technology’s laboratory had proved that such a practice was not like letting bulls into a china shop, the standard of instruction in colleges had been for the professor to perform the experiment while the class looked on. This Technology method, new half a century ago, toward training the college student in alertness of observation, and Rogers from the first had stood for more breadth of horizon than the strictly professional school had previously given.

In chemistry too, Crafts, Wing and Nichols had similar vision in opening the new method of laboratory instruction to large classes. Charlie Cross, whose recent death we mourn, and Gaetano Lanza of applied mechanics and “full-sized-specimen” fame, were beginning their practice on our immature minds. Ware and Henck were putting up the soundest courses in America on architecture and “civil.” Channing Whittaker and Robert Richards were helping everyone with whom they came in contact by their kindly humanity; and a little later from my own class there came into the physical laboratory Silas Holman, the most courageous and steadfast character that I have ever known; a man who kindled a higher ideality in every student and who had such wonderful poise that while blinded and dying by inches from

rheumatic arthritis he dictated to his wife out of his clear vision a beautiful little book on the fundamental physical concepts, and thus by example did his greatest teaching.

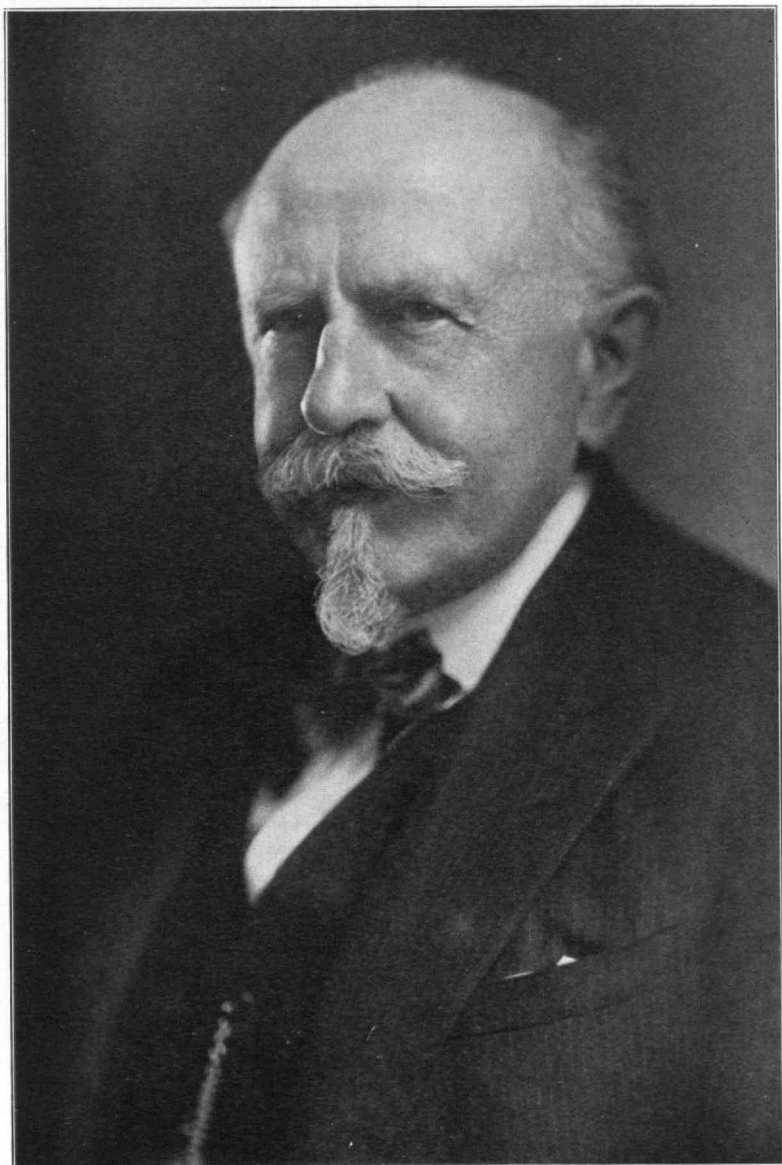
From our class also Lewis Norton came back to the chemical laboratories bringing with him the best that he could find in the German schools, and Swain from the next class did likewise, and they were among the first of a long line to bring back to our laboratories the results of studies abroad. And General Walker gave his dictum, "Technology is not a place for boys to play, but a place for men to work." And of hard work the load always has been pretty close to the elastic limit and cannot be increased. Can this maximum load be shifted here and there so as to give greater alertness, vision and horizon to the average graduate, and do this within a four-year course? What suggestions can we get from the progress of fifty years past that will be most helpful toward progress in the next fifty years?

In civil engineering, which in its narrower definition covers the construction of bridges and roads; the regulation of rivers for navigation or flood control; the providing of municipalities with domestic water supply, and the framing and proportioning of all sorts of great structures to resist force and time, the development of the past fifty years has not been in the old mathematical fields which were already well cultivated, but by excursion into many new outlying fields, of bacteriology, electricity, chemistry, geology and a new metallurgy based on the profoundest refinements of molecular physics; and there are strong reasons for carefully planning the courses so that each student shall have some idea of what is going on in every laboratory of the Institute.

New developments in mathematical theory have performed a smaller part in civil engineering than in mechanical engineering and far smaller than in electrical engineering — which was an art unknown fifty years ago — although the mathematician, Clark Maxwell, was then laying the foundations for the radio engineer of today.

A few evenings ago I took down from the top shelf my fifty-year old volumes of Rankine and Weisbach and as I turned their pages was led to believe that almost any of our great modern works of civil engineering — the Panama Canal; the Catskill Aqueduct; the Brooklyn Bridges; the Mississippi Bridges; the Roosevelt Dam; the New York Barge Canal; or the steel frame of the tallest skyscraper could be safely and economically designed out of these old textbooks. It is an interesting thought that the most difficult problem of the Panama Canal was solved by the biologists and by the applications of a science yet unborn in the days while I was studying at Technology.

The advance in the magnitude and in the perfection of structures has come from greater skill in organizing and directing the builders; from the vision of capitalists; from more abundant capital; from more powerful tools; and by the use of larger structural units and from making use of the excellent plastic structural material, reinforced concrete, the elements of which had been lying around for a hundred years in



JOHN R. FREEMAN, '76
President A. S. C. E.

such plain sight ready and waiting to be put together — *waiting for the man of vision* — that we now wonder that its general use began only about thirty years ago.

The wonderful recent progress in the economics of machine building began chiefly with the *alert vision* of Fred W. Taylor, engineer and metallurgist of broad horizon, in catching the significance of a chance shot which captured "High-Speed Steel," and again and again I would emphasize alertness and vision and horizon and would ask if the cultivation of these three cannot receive greater attention than heretofore.

The student who is expected to achieve great things must be given breadth of scientific horizon in order to stimulate his vision. He must "know something of everything." The "Civil" and "Mechanical" must have at least a glimmering of each of the arts and sciences, must be encouraged to know something of what his fellow students in chemistry, biology, petrography, microscopy, etc., are doing in their laboratories; must have his taste cultivated by lecturers and men of achievement outside his own narrow field, so that he will enjoy in later life the skimming through many books and technical monthlies and weeklies whose profundities he does not expect to understand, but all of which will help to broaden his horizon, stimulate his invention and keep his reservoir full.

I believe that fifty years ago Technology did more of this than any other engineering school and that today it does as much and perhaps more of this than most schools, but I would have it undertake the stimulation of these particular lines of culture and alertness of observation, horizon and invention as one of the most seriously studied parts of its four-year campaign.

In steel structures the recent progress is from refinements due to profound researches in heat treatment and the intimate composition of alloys by chemists and metallurgists. Our progress in the use of structural material is coming from lessening the factor of ignorance so that, sooner or later, our "factor of safety" can be cut from 5 to 3. In the building of dams and retaining walls progress is coming from the use of the microscope; the X-ray spectroscope is teaching how to make better alloys, and in recent studies of the earth pressure in hydraulic-filled dams I have come to believe that to have progress we must now call in the most skillful students of molecular physics to help us with their knowledge of the formation of colloids and adsorption.

Sedgwick made biology interesting to everybody; Albers did this with business law. Why cannot every laboratory have its popular expounder to tell its message to the whole student body at weekly or biweekly gatherings? with compulsory attendance and an Edison-like examination at the end for getting an idea of the per cent of seed that had fallen on stony ground and incidentally a summary of these markings would show to the Executive Committee who of the lecturers should have the "C" rating and who the "F." I believe the fundamental idea of those laughed-at Edison questions is all right. They

test a young man's horizon—a most important and productive quality!

In river regulation and the questions of how and why sand bars are formed—or how they can be prevented from forming—the mathematical studies begun in Italy two hundred years ago have not been developed during the past fifty years to give much that is of real use. On my shelf there is an elaborate treatise on river hydraulics, written in French sixty years ago; yet we are still in the state of opinions, rather than of laws established from observation, and very much the same stage of development now exists in the science of river hydraulics that existed in chemistry prior to the universal use of the balance or in electricity prior to the “C.G.S.” units. There is a field here in river training and in flood control whose development is awaiting the young man of alert observation, horizon and vision, and as a means thereto I hope that before many years we may have in America a River-Flow Laboratory modeled, on larger scale, from the Fluss Bau Laboratorium at the Dresden Polytechnikum. There is ample foundation for the belief that by coördinating experiments in such a laboratory which observations on the full-sized specimen in the field, a few years of patient study would produce results of far-reaching commercial importance.

In general the mathematics of civil engineering has advanced but little in fifty years. Weisbach and great French engineers had developed these beautifully even seventy-five years ago and there was a little book on water supply published eighty-seven years ago by Charles S. Storrow, based largely on what had been taught him in the old French engineering school of Bridges and Roads, which is so well balanced and so complete in mathematics, differential equations, and in practical data that it would make a good college textbook today.

It was my great privilege to intimately know Mr. Storrow, who lived to the ripe old age of ninety-six and who, in his day and generation was the best educated engineer in America. After graduating from Harvard at the head of his class about ninety-three years ago he read extensively in the library of Loammi Baldwin and determined to become a civil engineer. It is of interest to know something of his vision and his training for horizon.

There is a story that on stating this decision to a friend of the family, Channing the great preacher and scholar of the day, he asked, “*What is a civil engineer?*” and on the young man telling him of his vision of the multifarious knowledge necessary, Channing interrupted the young man, saying. “Stop, Charles; already you have said enough to convince me that no *one* man can be a civil engineer.”

Storrow went to France, studied in the famous French engineering schools, went to England, where Stevenson had just been successful with his new invention, the steam locomotive, took service under him, came back to America and built the first railroad in New England and later developed the water power of the Merrimack at Lawrence, and incidentally promoted the founding of the Lawrence Scientific School

to be a school not of pure science but of applied science — or of civil engineering, from which high purpose this school very curiously became diverted mainly to pure science, leaving an aching void for Rogers to fill with our Institute of Technology at a later date.

It was my privilege, some seventeen years ago, to rediscover in an alcove of the Public Library at the small city of Woburn, Mass., and in the attic of the old family mansion, this Baldwin Library from which Storow drew his early inspiration. It was a wonderful selection of books in science, natural history and literature for ninety years ago, and a monument to the breadth of horizon of the "Father of Civil Engineering in America." The scientific portion now reposes under the Technology dome. It is extremely interesting in showing what constituted the best engineering library in America at that time. The books, mostly in French, were filled with profound mathematical theory and in turning their pages one wonders how after all this beautiful theory by the early French engineers the English came to do a so much larger share of the world's engineering work.

The Frenchman, Mariotte, nearly two hundred and forty years ago, laid the foundations of experimental hydraulics, and Couplet, one hundred and ninety years ago, experimented on the flow in pipes. Bousset, one hundred and fifty years ago, added both data and theory and it is nearly one hundred and fifty years since Chezy worked out his formula for hydraulic flow of almost universal application, which we use today.

Perhaps in this difference of achievement of English and French engineers in the wide world there may be a principle which it is worth while for our schools to note, namely, that mathematical analysis is only one of the tools in the outfit of the engineer, and ask, Did not the English designing and constructing engineer rely more than did the French, on that training that is gained out of doors on construction jobs, in "The School of Hard Knocks"?

Perhaps by studying the lives and the peculiar methods of the greatest engineers who have led in directing the great forces of nature for the benefit and convenience of man, like Watt, Stevenson, Baldwin, Francis, Bessemer, Holley, John Fritz, Hoadley, Cheesboro, Eads, Morrison, Westinghouse, Noble, Stearns (naming only those who have gone on to their reward), not one of whom was distinctively the product of the technical school, we can get some ideas helpful toward developing a larger percentage of our Technology output into great leaders. Although these particular men were not profoundly trained in mathematical theory, those whom I have known always had one or more good mathematicians handy. The driving force, the captain, was the man of vision — the mathematician was his lieutenant.

Right in the beginning of our foundation courses I would put plenty of mathematics and try to have differential equations as handy as a monkey wrench, and I rejoice that Technology has some wonderfully good mathematical talent now, and that one, Edward B. Wilson, is

head of the Department of Physics; for great engineering is simply applied physics — applied by a man of vision and judgment — but for later years at the technical school I am strongly inclined to believe there can be a great gain by applying more thought to the ways and means for teaching ingenuity and judgment; and if this requires an added year, the time may be well spent.

There are systematic methods of invention in use in the industries which I imagine can be formulated for training in the schools. Not many years ago the teaching of business administration in college to boys of twenty-one would have been scoffed at. Is it not just as possible to work up good courses in scientific invention and cultivation of engineering judgment and in alertness of observation? I believe it is. Is there not some way in which courses at the "prep" school and at the engineering college can be better shaped as to develop the faculty of ingenuity? Are there not laws of inventive process for developing the scientific use of the imagination? And cannot the development of judgment be stimulated in the undergraduate by better means than those now used?

As a rule it is not the brightest mathematician of his class who makes the best engineer or develops into the man who does the most for the world. A broader training is necessary — more of horizon. And this is why the man from the academic college course, after ten years, often equals or outruns in success the man of narrower training. Rogers and his successors realized this and to this day I believe that one of our most valuable teachers for engineers was Howison, our professor of philosophy.

There was some fundamental truth mixed with fancy in the "stunt" at Tech's Nantasket Reunion Celebration — which proclaimed that the men who lost out in the awards of academic degrees gathered in the best prizes in the competitions of after life. The faculty yardstick for measuring men for degrees has sometimes been far from an instrument of precision.

Let us not forget that the first stages in Bessemer steel, in the telephone, in the electric lamp of Edison, or in the conquest of the air by the Wrights, or the development of the high-speed turbine, or that beautiful altruistic conception of good to mankind of which the late Fred Taylor's work on scientific management — scarce half finished when interrupted by death — came from a *pioneering instinct aided by alert vision and broad horizon*. Cannot more be done toward cultivating pioneering spirit by the training of the technical school?

The personality in professor or president that can better awaken these qualities of alertness, vision and horizon is more important than profundity in mathematics or technics. Technology's founder, Rogers, achieved ten-fold more results through his magnetic sympathetic personality than through the soundness of his theories on geology, and Sedgwick, whose recent loss we mourn, had this great gift.

It is presumptuous and rash in me to seemingly proffer advice to

those who have spent their lives in teaching and who may retort, that for forty years they have been aiming their teaching at these very objects, and will deplore my ignorance, but I speak from a deep feeling that more can be accomplished and a better average product turned out by first selecting the entering students more carefully and next, by pounding into their appreciation the importance of self-development in horizon and alertness of observation and the scientific use of the imagination or invention.

All of us who have been long at the business of engineering appreciate the vast difference in capability between the average school-trained mathematician or office-trained designer who has never been much in the field, and the young man of perhaps smaller preliminary training and smaller native ability who has spent a few years in the rough and tumble of construction, in close contact with mechanics and laborers. A time-keeper's job on a big hustling construction may prove the very best first post-graduate course after Technology for its education in human nature and point of view.

The world's great work is done by the man with the broader vision and the better understanding of human kind. A large percentage of our graduates from technical schools and colleges do not possess and do not acquire this broader vision and if some way could be found by which the undergraduate could be given more of a start in this direction and made to more profoundly appreciate its importance, it would be a helpful step in advance and for the good of our country.

I, with many others, wonder how this can best be done. The first step should be a more careful selection of freshmen, and next a more considerate plucking at the end of the freshman year. I have long felt that the method of entrance examinations could greatly be improved by common-sense methods of brief personal contact and the "once-over" that a business man gives, which might give a better measure of the promise of success; and I gather that since our psychologists had their innings during the World War and have returned to their colleges, that here and there is being worked out a more scientific basis of selection than the written examination alone. Meanwhile supplementing the ordinary entrance examination and the "prep" school certificate by a set of "Edison Questions" for finding out the extent of horizon or general information that the boy had thus far acquired would give a better basis of selection than reliance solely on present tests. It is a question how many bright boys out of the hundred who have the opportunity and the persistence to get through the preparatory school, are born with that kind of brain which can be trained to inventive analysis.

Doubtless there is a possibility for some good measure of success and happiness in the world's work open to everyone who, by slow process of selection through preliminary schools, has arrived at the stage where he is qualified to pass (or half pass) the ordinary college entrance examination, but many of these products of survival of the

fittest, up to the stage of entering the door of the technical college doubtless could find their highest success, happiness and usefulness through other channels than those for which Technology trains men and women.

There are a lot of other good schools and I have often thought Technology with its magnificent outfit could find the special field for doing its best work for America and for the world, if its numbers were restricted to, let us say, not more than three thousand students, carefully selected along lines suggested above, and if afterward, from year to year, there could be some carefully worked out plan of sorting and sizing by which those of special aptitude or promise in the scientific use of the imagination which would bring later the highest success in research for invention, or in the advancement of science, or advancement of the arts, could be separated out and given their proper greater opportunity before the end of the fourth year. Perhaps the numbers thus selected would be only a fifth or a tenth, or a twentieth of the whole three thousand and it needs about that volume of business to give sufficient opportunity for selection and to make the selected group of economic, workable size.

In the industries and science there must be more corporals than captains, more captains than colonels, and more colonels than generals. The number of schools of engineering has multiplied wonderfully since my student days and is still multiplying and I believe there is room for everyone, but as a devoted alumnus I would like to see Technology, with the best equipped laboratory in the world, devoting much of the energy of its able teachers to training the largest practicable number of future captains of industry, inventors and researchers out of a carefully selected and limited group of three thousand and giving a further sorting and sizing and special separation year by year, with a kindly treatment for all, but special opportunity for those of special endowment or industry. The tonnage output in education is not attractive, nor is the method that shapes a hundred in the same mold.

Having, through some kindly and thoughtful process, selected the boys of ingenious brain, the next thing is to find means of further developing this ingenuity and for developing the faculty of judgment, and giving time also for developing a well rounded personality by contact and attrition with their fellow students.

It makes little difference which course a young man selects — whether civil, mechanical, electrical or chemical engineering — if only he can get well trained in the scientific method of approach to a problem and can get well started in the scientific use of the imagination.

After all, a wise good-fellowship may help a student more than high scholarship toward usefulness and happiness in life, and the future of our country's progress depends far more on these qualities of ingenuity, judgment and personality than on facility in mathematics.

While I was working on the outline plans for the new Technology buildings ten years ago I tried to work some of these thoughts into the masonry of corridors and halls and a cloister-garden, opening from the

Reading Room to the Library that would compel social contact, and a shaping of buildings and grounds so that in the three or four vacation months this finest plant in the world, instead of being mostly idle, could be used for a science teachers' summer college, that would advertise the attractions and stimulate these teachers of science from far and wide to send their brightest boys to Technology, but my suggestions were lost to an architect without a broader vision than the picture from across the Charles.

What I have been saying all finally leads toward one of the present problems at Technology — that of finding the right man for President, for chief executive, who will have the personality to lead the way in developing to the maximum possible in four years of student life the true pioneering spirit and these important qualities of alertness and horizon.

I wonder if the best practicable specification for a college president has yet been written. There is no more difficult position on earth to fill, and there is no more thankless job, to one who has not the vision to see beyond the many petty troubles of each college president's day, and look beyond this for the hoped-for product, doing the world's work and ministering to the advance of human-kind in health, comfort and happiness. I have known with some intimacy, perhaps a dozen college presidents, and I gather that some of their troubles are like those of the impresario with a troupe of prima donnas. A college president once said to me, "Thank your lucky stars that you deal with business men who are accustomed to compromise and not with the members of a college faculty who can see things only as black or white and will admit no intermediate shades; who feel that they are, individually, each the guardian of the sacred truth and that to compromise with a fellow member would be as wrong as to compound a felony." Another great college president told a friend that his life was in some respects like that of being tied down and nibbled to death by ducks; *i.e.*, worn out by the continual nibbling of little things, implying that it might be a happier lot if at times he had to take chances against a lion, with intervals of quiet between.

Recently I have had a letter from a prominent alumnus of another great scientific school, who has passed along to me a letter and asked my help in suggesting men who would fill a specification made by one of the committee which began, "An eminent man, distinguished for research." I wrote my friend that I believed the specification had been poorly drafted and other qualities were far more important than eminence attained in science and research, and that with the best candidate, the eminence and distinction might be a long way in front of him and not behind him.

Let us seriously consider what are the chief qualities required in a college president, and let us try to write a few articles in a better specification than some of those that seem current. Some patrons of universities demand that first of all he must be a graceful after-dinner speaker; others of keen business instinct look for qualities as a "gold

digger." The faculty perhaps may insist that he be a scientist of higher authority than the best in their group, and the undergraduates would highly appraise him who could pitch the first ball or stimulate the cheering at the interclass or intercollegiate games; but after all, is not the foremost and greatest requirement for a college president that rare gift of being able to lead the thought of young men; ability to kindle the divine fire in young and courageous hearts, like that possessed by President Roosevelt, or the famous Dr. Arnold of Rugby, or our own lamented Sedgwick. A quality of equal importance, because of the few points of direct contact between President and student, is that rare but most important gift of personality which can arouse and encourage coöperation and enthusiasm and industry for these same ends throughout the scattered, broad and diverse members of a college faculty.

Twenty-five years ago I came to live in the shadow of Brown University while Andrews was president. He was far from sound in some of his theories and the solid men of the business community who helped the University over its hard places were sometimes fearful of his teachings in Political Economy. I believe he was blind in one eye and my picture of him is in a slouched hat and garments that lacked the attention of a valet; but somehow he did possess that driving and spiritual force of personality such that every undergraduate and every young instructor seemed to have come within his field and to have cut some of his lines of magnetic force, and ten or twenty years after he had left the campus there was no name that could be mentioned in the assembly hall that would raise such a round of cheers.

Also he had that rare gift of picking out instructors who had their great success in front of them instead of behind them; of "comers" who had not yet "arrived." Please understand that I do not refer to him as, in all respects, the kind of man for whom we are looking, but certainly he possessed two of the main articles in the specification — the electrifying of undergraduates and ability in picking instructors.

Is it not almost certain that the man who meets our specifications most nearly must still be young, probably too young to have achieved the degree of eminence that we might like? Only a week ago I was talking to one of the most devoted and successful professors that Technology ever produced. Ten years ago he had resigned and gone into business. He told me that one reason for his resignation was that he felt he was losing his grip on the average student, and that while the more mature came to him with their thesis problems or with their difficulties, that he feared he was getting too much apart in years from the average sophomore or junior to do his best work; though I doubt not he has become wiser than ever. This youthful sympathy is more important to the teacher than to the chief executive, still, unless like our founder, Rogers, the man is a genius, the more of youth that can be had with wisdom and tact, the better.

Search this country through and probably you will not find a candidate who, after having all his qualities correctly assayed, would score above, say, 80 per cent of the ideal, but the conclusion to which

I have been leading in this talk is that the quality in which he should score nearest 100 per cent is sympathy and leadership of young men into an atmosphere charged with energy and ideality; charged with a love of the truth, with an ambition to be of service to their fellowmen, and in ability to secure coöperation and thus arouse spirit among the faculty.

The thoughts which I have been trying to bring to the surface are:

1. The fundamental importance of breadth of horizon.
 2. A more painstaking selection of fresh men by psychologic and common-sense tests and a limitation in number.
 3. That a wise, good fellowship in college is quite as important as high scholarship. It helps to breadth of horizon.
 4. The possibilities of systematic instruction in scientific methods of invention.
 5. The possibilities of strongly directing undergraduate attention to the cultivation of judgment.
 6. That the great function of the college president is the charging of the college atmosphere with lines of magnetic force, properly exciting faculty and student, and that possibilities in doing this come far more from an inspiring personality — the great gift of the gods — than from great eminence and reputation as a researcher.
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THE WOMEN'S ASSOCIATION

THE Massachusetts Institute of Technology Women's Association held a tea in the Emma Rogers Room, Friday afternoon, March 10. The speaker was Prof. Samuel C. Prescott who gave a very interesting talk on "How to make coffee." The talk was followed by a social hour during which refreshments were served. The hostesses were Miss Lois Lillie Howe and Prof. Elizabeth F. Fisher.—*Cornelia Nelson, Recording Secretary.*

MEDAL AWARDED TO CHARLES WARREN GOODALE FOR SAFETY AND WELFARE WORK

THE gold medal of the Mining and Metallurgical Society of America was presented on January 10, 1922, to Charles Warren Goodale, '75, III, "for signal services in furthering the welfare and safety of workers in the mining and metallurgical industries of America." The presentation was made by Dr. J. E. Spurr, president of the Society for the year 1921, at the annual meeting held in New York City.

Dr. Van H. Manning, formerly director of the United States Bureau of Mines, made the first address. Toward the close of his brief speech, he said, "It has been happily suggested, 'Let us balance our praise of war heroes by pausing to honor a hero of peace.' We have with us tonight a man who has been a leader and inspirer of thousands of his contemporaries. His zeal in the great work of increasing the safety of men engaged in mining and metallurgical operations has become an obsession with him. That he has been successful is evidenced by the great work, of which I have personal and intimate knowledge, done by him in connection with the Anaconda Copper Mining Co. and its subsidiaries."

Dr. J. F. Kemp gave a brief sketch of Mr. Goodale's career, in the course of which he said, in speaking of the consolidation of the Boston and Montana, the Anaconda, and smaller companies: "At the same time electric current was introduced for haulage in the mines and on the surface for the running of air compressors and the hoisting of the cage. We can see that there was great danger to the miner and that safety first became a very important feature of the work. As time has passed, we find all the southeastern peoples of Europe, many of them unable to speak English, employed in the mines. It becomes a very difficult problem to maintain proper precautions for safety with so diverse a series of people and with such careless men. In later years, all these various lines of safety first have fallen to Mr. Goodale, and very successfully and admirably has he carried out the heavy responsibility of his position. Within the last year, with all the large mines practically idle and only the smaller silver mines in operation, with fifteen or twenty thousand men thrown out of work, with families necessarily in need, the welfare work had become an operation of the very first magnitude. The society has never taken a more admirable step than when it decided to confer its medal upon Charles W. Goodale, the best loved man in Butte."

Mr. Goodale was a member of the Class of 1875 of the Massachusetts Institute of Technology. He began his professional work in 1876, with the Boston and Colorado Smelting Co. In 1880, he became superintendent and manager of the Boston and Arizona Smelting and

Reduction Co. at Tombstone; and five years later went to Butte to be superintendent of the Colorado Smelting and Mining Co. In 1898, he became affiliated with the Boston and Montana Consolidated Copper and Silver Mining Co., as superintendent of the smelter at Great Falls; three years later he became assistant manager, and in 1912 was made manager.

Since the Boston and Montana was merged with the Anaconda Copper Mining Co., Mr. Goodale has been chairman of the Bureau of Safety of the company. He will present at the New York meeting of the Institute, February 20-23, a paper by himself and which outlines the work of the Bureau of Safety, but tells only by implication of his own share in the tremendous task.—*Mining and Metallurgy, February, 1922.*

TECH MAN WHO MOVES TOWNS

THE man who was considered the "engineering brains" in the moving of Hibbing, Minn., and who devised the plans which made that undertaking successful, is going to "move" another city. This time, the scene of his endeavors will be in China.

He is L. D. Davenport, '07, I, who was chief engineer for the Oliver Company in Chisholm and Hibbing for a number of years. He is on his way to China to have charge of moving a town for uncovering a coal deposit.

The situation was somewhat similar in Hibbing. Here, it was iron deposits; in the Orient it is coal. The city is Fushun, which is located in central Manchuria. Steam shovels will take away the earth covering. The coal is owned by the South Manchurian railroad. It is estimated the moving will cost five million dollars.

Davenport was a member of a party of five who left Minnesota recently for an investigation of the situation in Fushun. The fields are said to be the richest in the Far East, containing eight hundred million tons of coal.

GEORGE VINCENT WENDELL, '92

A well-beloved Technology instructor for many years

GEORGE VINCENT WENDELL was born in Plainfield, New Jersey, on August 16, 1871 — the son of George William and Mary E. Wendell. When thirteen years of age, his family moved to Cambridge, Mass., where he attended the Cambridge Latin School. In the autumn of 1888 he entered the Massachusetts Institute of Technology and graduated with the class of 1892. While an undergraduate he became a charter member of the Sigma Tau Chapter of DKE and always remained most interested in its welfare. After graduation he remained three or four years at Massachusetts Institute of Technology as an assistant in physics; and then went abroad for further study, taking a Ph.D. degree after two years at the University of Leipzig and then spent a year in research at the University of Berlin. Upon his return to Boston he entered the faculty of the Massachusetts Institute of Technology as a teacher of physics and remained there until June, 1907 — the last three years as an associate professor. In addition to his work at Massachusetts Institute of Technology, in 1902 he established the Department of Physics at Simmons College and in 1906 he reorganized the Department of Physics at the Boston University.

In the autumn of 1907 he went to the Stevens Institute as professor in charge of the Department of Physics, where he remained for three years, making his residence in New York City. In July, 1910, he became professor of physics in Columbia University, a position he held until his death on March 15, 1922, at his home, 450 Riverside Drive, New York, after a short illness of pneumonia. On March 18, 1922, an impressive and beautiful funeral service was held at Saint Paul's Chapel, Columbia University, whence his body was taken to Cambridge, Mass., for interment in Mount Auburn Cemetery. In July, 1902, he married Mary Prescott Hitchcock of Somerville, Massachusetts. Besides his widow, his mother and a sister survive him.

A capable and beloved teacher, a devoted friend, a man of high character whose influence for good was far reaching and whose work will live long after him.

A TECHNOLOGY MAN IN RUSSIA

The following letter is from a former Russian student at the Institute, now a professor in one of the large Russian universities. It was written about the beginning of the present year and gives an unusual picture of the difficulties under which the teaching and other learned professions are laboring with the present Russian government. The letter has not been edited; it is an exact copy. It was written to a member of the Department of Mining Engineering who kindly offered it to the REVIEW.—EDITOR.

"Over a year passed since I wrote you the last letter. There is a rumor that the mail may go through and it is possible to resume our correspondence.

"None of your papers reaches us still yet and I am trying to find out the ways how to get information from you. Please try to send something to me. It is sorrow to be for such a long time separated from the rest of the world. Thanks to the kindness of Dr. Ingalls, I was able to get a copy of the Eng. and Min. Journal for 1919 just before the strike was declared (May-Oct.) and this is, as far as I know, the only copy of this journal in our part of Siberia. You understand that under the present conditions we are unable to pay for them, because of the unsettled situation but the time is coming when all the government debts would be paid fully and our establishment is really the only engineering educational institution in whole Russia left practically intact during the period of the revolution with all its staff working. At the very beginning everybody was allowed to have his ration just enough not to die. Children, workmen and women have the same allowances. The result was that nobody was interested in his work and a shift was shortened some times for about two hours. Food was not sufficient and we were eating oats.

"Then we enter into the second period when they were trying to interest for more production but all kinds of trade were prohibited. Still no good result. Afterwards, since last summer the market was opened and the people were interested in bigger production.

"The trouble was that prices were so high that it was necessary to carry with you a bag of money. Imagine what kind of bag was needed to hold half a million dollars of banknotes. The only advantage is that such a purse will not be stolen — too heavy.

"The results of a new economical politics begin to appear now. Many of new establishments which grow after the revolution like mushrooms were closed, number of employees was reduced for over a half. Only those were left who were necessary and for those who were left the conditions show a sign of betterment.

"The trouble is that we are unable to get our salary, but we are forced to work hard. Last semester I had 26 hours of lectures.

"As you know from newspapers we cannot resume a normal life

and we are not permitted to show the results of experiments which took place all over the whole Russia. Last summer I was sent by the Institute for investigations of several mining districts situated on the Volga, really at the center of an area starving from hunger. I would not like to repeat such an experience. I myself was about to starve there. Even here, we are allowed a following food ration: 30 lb. of flour (black and sometimes mixed with fine particles of sand—bad for children) and 2 lb. of butter (sometimes) and 3 boxes of matches. That is all. No meat, sugar or anything else. This ration is allowed at present only for workmen, notwithstanding his position or number of his family's members. There you have to divide it among all members of your family. You can find food in a market the trouble is that we get no salary since the last August and we are unable to buy. Salary was forty thousand roubles. The prices are rather high: 1 lb. of rye bread cost fifteen thousand roubles, 1 lb. of butter one hundred and eight thousand, 1 lb. of meat about thirty thousand roubles. I should not say about clothes, shoes—too expensive. Half a million roubles would not be sufficient to buy food for a family for a few days.

"We are starving also from mental hunger, and may be you can help me.

"I should be also much obliged if you send something for my wife for instance: Lady Home Journal or some catalogues like Bellas Hess, Montgomery Ward or something like that. She is very fond to know how the people are living there.

"My greatest wish is to get a few lines from you.

"Please give my compliments to my dearest teachers: R. Richards, Hofman, Bugbee and Lindgren."

MEDICAL DEPARTMENT HAS TAKEN CARE OF 5,200

SINCE the opening of the second term, the Medical Department has been called upon to treat more than 5,200 cases. This large number is due to a great extent to the unusual climatic conditions to which we have been subjected, and it is interesting to note that the majority of the cases have been of the type usually caused by inclement weather.

From January 1, to the end of the second term, there have been 5,218 cases treated. Of this number, about 1,700 were diseases of the respiratory tract, such as colds, grippe and influenza. There have been about 30 accidents, 25 hospital cases and 6 fractures.

ADDRESSES WANTED

Mail has been returned to the Alumni Office for the following former students.
Information is desired concerning these people, that they may be kept on the mailing list.

WALTER HUMPHREYS, *Secretary.*

<i>Name</i>	<i>Class</i>	<i>Last Known Address</i>
Aechirau Honagma	'74	Ichikawa-Chibaken, Japan
Edward N. Sampson	'76	21 Saratoga Street, East Boston, Mass.
Walter H. Plimpton	'77	373 Harvard Street, Brookline, Mass.
Joseph D. Plumb	'83	8 Landscape Avenue, Yonkers, N. Y.
Charles B. Emerson	'85	Sixth Avenue, San Francisco, Cal.
Frank B. Van Nostrand	'89	246 75th Street, Apartment R-4, New York, N. Y.
Guy J. Burnham	'92	The Watson Co., Attleboro, Mass.
Miss Marion H. Carter	'93	504 West 143d Street, New York, N. Y.
Arthur Farwell	'93	2811 Forest Avenue, Berkeley, Cal.
Edmund L. Andrews	'94	Care Chase Electric Co., Box 217, 105 South Dearborn Street, Chicago, Ill.
Howard E. Whiting	'94	The Esmond, Philadelphia, Pa.
George S. Bowes	'96	Box 223, Monessen, Pa.
Julius F. Gayler	'96	8 Beacon Street, Boston, Mass.
William D. Smith	'96	Mineral Point Zinc Co., Depue, Ill.
Salmon W. Putnam, Jr.	'97	Care Bridgeford Machine Tool Works, Rochester, N. Y.
Wallace F. Goodnow	'99	104 West 42d Street, New York, N. Y.
David H. Hayden	'99	103 Park Avenue, New York, N. Y.
Henry Grant Morse, Jr.	'99	340 Madison Avenue, New York, N. Y.
Harris G. Hooper	'00	340 O'Farrell Street, San Francisco, Calif.
Edwin P. Burdich	'01	Corodva Apartments, 80 South Carolina Avenue, Atlantic City, N. J.
Thomas M. Lunan	'01	545 Crescent Avenue, Buffalo, N. Y.
Mrs. Bayard R. Frazier	'03	32 Curtis Terrace, Pittsfield, Mass.
William A. Harrigan	'03	677 Dudley Street, Box 30, Boston, Mass.
James P. Buckley, Jr.	'04	86 Flint Street, Salem, Mass.
Henry L. Lyman	'04	I. C. C. Bureau of Valuation, Eastern District, Washington, D. C.
Enrique Cuesta-Gallarde	'05	Panoquia 13, Guadalajara, Mexico.
Leo F. O'Neil	'05	618 Winthrop Building, Boston, Mass.
Howard C. Blake	'06	1563 East First Street, Long Beach, Cal.
Frank Haley	'06	9 Adams Court, Lynn, Mass.
Louis H. Tripp	'06	Office Quartermaster General, War Department, Washington, D. C.
Howard J. C. MacDonald	'07	812 Birks Building, Vancouver, B. C.
Charles W. Bailey	'08	North Hancock Street, Lexington, Mass.
Philin T. Harris	'10	6113 Carpenter Street, Philadelphia, Pa.
William E. Fortune	'11	McLean Hospital, Waverly 79, Mass.
Benjamin Robinson	'11	464 Chestnut Street, Springfield, Mass.
William J. Wilson	'11	11 Glenway Street, Dorchester, Mass.
Herbert S. Cummings	'12	104 Sharon Street, West Medford, Mass.
Charles L. Gabriel	'12	Port Morris Chemical Works, Inc., 141st Street and Locust Avenue, New York, N. Y.
Francis T. McAvoy	'12	13 St. Joseph Street, Jamaica Plain, Mass.
Cecil B. Vaughan	'12	Presso "Idres," Terni, Italy
Roldao Barbosa	'14	68 Rue Assembleia, Rio de Janeiro, Brazil
Herbert H. Hall	'14	Care Aluminum Co. of America, Alcon, Tenn.

<i>Name</i>	<i>Class</i>	<i>Last Known Address</i>
Mrs. Ray W. Hart	'14	Jerome, Ariz.
Richard E. Morrison	'14	6 Orchard Street, Belmont, Mass.
Mervin S. Hart	'15	New Britain, Conn.
Harry I. Lewis	'15	1878 East 82d Street, Cleveland, Ohio
Walter J. Stewart	'15	99 Claremont Avenue, New York, N. Y.
Laurence H. Delabarre	'16	Bullard Machine Tool Co., Bridgeport, Conn.
Lewis M. Dow	'16	19 Woodbine Street, Auburndale, Mass.
Chan Kinthong	'16	Care Lumkee, Bangkok, Siam
Hsien Wu	'16	316 Huntington Avenue, Boston, Mass.
Donald G. Ferguson	'17	56 Bay State Road, Boston, Mass.
Col. Edgar S. Gorrell	'17	War Department, Washington, D. C.
Paul Hart Scott	'17	Waban Hill Road, Chestnut Hill, Mass.
Walter R. Herfurth	'18	70 Batavia Street, Boston, Mass.
Charles A. Hunter	'18	82 Woolson Street, Mattapan, Mass.
Elmer W. Lawrence	'18	Woods Hole, Mass.
Harold W. Trease	'18	Newton, Iowa
Ray H. Bartlett	'19	19th and Wentworth Streets, Lowell, Mass.
Victor T. Givotovsky	'19	1324 St. Nicholas Avenue, New York, N. Y.
Gee C. Liu	'19	Care Young Men's Christian Association, Roanoke, Va.
Karl F. Rodgers	'19	156 Pearl Street, Winter Hill, Mass.
Victor Samayloff	'19	10 Lothian Road, Brighton 35, Mass.
Nobuo Yamamoto	'19	Shigaken, Japan
Freeman H. Dyke	'20	40 East 40th Street, New York, N. Y.
Simon Freed	'20	365 Summer Street, Paterson, N. J.
Catherine D. Jones	'20	4 Gay Street, Newtonville, Mass.
Yuan Lee	'20	Canton, China
Herbert G. Lockhart	'20	1333 North Frezier Street, West Philadelphia, Penn.
Samuel A. Milliken	'20	149 Warren Street, Roxbury, Mass.
Benjamin C. Morse, Jr.	'20	Manila, P. I.
Juichiro Okada	'20	Hiroshima, Japan
Elias K. Sehagian	'20	Kesirig, Armenia, Turkey
Simeon E. Travis	'20	Box 141, Knoxville, Tenn.
Han Chen Wang	'20	Peking, China
James J. Wolfson	'20	10 Beach Road, Winthrop, Mass.
Emil J. Bachmann	'21	56 Fenwood Road, Roxbury, Mass.
David J. Baker	'21	6 Leverett Street, Boston, Mass.
Elmer L. W. Barry	'21	Concord Street, Holliston, Mass.
Joseph H. Bayle	'21	321 West 76th Street, New York, N. Y.
Robert E. Beard	'21	New Hope, Pa.
Raymond F. Cornell	'21	89 Pleasant Street, North Andover, Mass.
Arnold R. Davis	'21	177 Main Street, Medford, Mass.
J. Lincoln Dodson	'21	Des Moines, Iowa
Carolus L. Eksergian	'21	9 Madison Street, Somerville, Mass.
Harold Finkelstein	'21	Scranton, Pa.
Winfred L. Foss	'21	Buffalo, N. Y.
Laureus M. Hamilton	'21	Sterlington, Rockland County, N. Y.
Melvin C. Rose	'21	26 Webster Street, Brookline, Mass.
Homer N. Wallin	'21	Washburn, North Dakota

EDITORIALS

THE ALUMNI DIRECTOR

It is five years this spring since the Technology Alumni Association has had an alumni director, since I. W. Litchfield, the first and only man to know and control the alumni as a body, left Cambridge for Washington in the earliest days of the war. Since then, except for a period of about six months when a rapidly improvised and extremely efficient organization held the alumni together for the endowment fund campaign, the alumni have been allowed to go their own gait. The news from the local associations show that they resent rather being left to themselves, that the effect of the drive has almost entirely worn off, that the whole alumni world of Technology is at loose ends, rapidly losing cohesion and interest and vitality. Each year the problem of getting them back into line is becoming more difficult . . . and more necessary.

In the leading article in this issue the chairman of the committee which for two years has had the task of securing an alumni director, sets forth his views on the matter. We commend the words of Merton L. Emerson to your attention.

At the annual dinner in January the president of the Alumni Association read a specification he had written for an ideal alumni director. It was, admittedly, the ideal, and was in line with the ambitions which have been entertained, for the past two years at least, for the office. Those ambitions call for a man who shall represent the Institute as well as the alumni, who shall hold an office corresponding to that of a vice-president in a great business, a servant of the Corporation as well as the Association, a man not incomparable in power and experience and remuneration to the president himself, who shall inspire and control the alumni and teach them to consider themselves a permanent portion of the Institute organization and not merely an occasional asset. He must be acceptable to the president since he must work in harmony with him. He must be what is popularly termed a "big man."

That is the ideal. The difficulties of finding such a man at present are enormous. It means finding a man to whom a career is open already, who has perhaps entered upon it; it means offering a position attractive enough to compensate for other opportunities foregone. Furthermore, he cannot be chosen until we have a president to whom he is *persona grata* and with whom he can work to the best advantage. Had Dr. Nichols taken up the reins of government as we had hoped and expected, such a man might already be installed in office and hard at work. As it is, we are as far from securing him as we were at the time of the endowment fund campaign. There is as yet no word of a possible president. There may not be such a word until the next school year

is under way. Under those circumstances it may be the better part of another year before we have an alumni director functioning. The Association and — Technology — cannot wait that long.

It would seem that a compromise is inevitable. After all, the most immediately essential things can be done by a younger man, or by a man of smaller calibre. It will mean limiting the scope of his work, but what we need at present is not scope but intensity, some kind of action. We need a man to get the local associations on their feet again, to repair the central organization, to act as liaison between the school and its graduates, to swing around the circle scattering glad tidings of great joy — just as Litchfield used to do to — coöperate with the Institute's publicity department in getting the local associations everywhere to spread Technology publicity, to help make the REVIEW a vital and necessary organ of news and stimulus — to do a dozen immediate jobs.

We can get such a man without question. A young man, preferably, since the greater half of our membership dates from the last decade or so. A man who will do what Litchfield did and with the same spirit. A man whose career is still to make, who may not want to call this his life work, but who would be glad to put a few years on such a work, at a reasonable salary, realising that the opportunities are such as to be a life-long asset to him in any walk of life. A man who could be told flatly that it is a hard, interesting and pressing job, but not a permanent one. Such a man could be secured by the end of the present school year, to start work at once, and by next Christmas we should have this Alumni Association an organized and going concern.

That would give us breathing space, to look around us and study the great organizations of sister institutions, Princeton, Yale and Harvard, organizations for which Technology blazed the trail but which have gone steadily ahead of us of late. We could learn, and, perhaps, make the Corporation realize, that you can't get money without investing money. We could draft more specifically the specifications of an officer, or even officers, who could take a lot of detail work off the president's shoulders, who could serve both the Alumni and the Institute, who could handle Technology publicity in a large and effective way, who could seek out and interest possible benefactors, who could, in short, weld the entire body of Technology interest, past, present and future, into an effective instrument for making Technology greater, richer and more powerful than we dream of at present.

And then we could find the man, and find him easily, to match Mr. Little's and Mr. Emerson's specifications. But the ideal of the future must not be allowed to hamstring the present. The local associations are dissatisfied; they are letting us know about it in no uncertain terms. We must satisfy them first, at once, and in a practical way. And doing the thing which is at hand to do will prove also the quickest and surest step towards something better.

THE POPS

On Wednesday evening, June 7, the Class of 1922 is planning to attend the Pops at Symphony Hall in a body. Notification to this effect has been sent separately to the members of the Alumni Association. It is hoped that enough of the alumni will subscribe, for the moderate price of \$1.15, so that there will be no public ticket sale and the program for the evening can be entirely in Technology hands, which means songs, specialties and stunts such as would not be possible if the public are to be admitted.

Anyone who remembers the old Tech Pop Nights will want to see the custom revived as splendidly as possible. Last year the Pop night of the Senior Class came on the evening of the alumni dinner to President Nichols and many alumni who went over later were not able to secure accommodation. In the old days that night was used as the occasion for welcoming the seniors into the fold of the alumni. One year every senior was run through a stamping mill that stamped him a genuine "Made in Technology" graduate. Another year they were welcomed with a pageant representing the history of the Institute. It is a good custom and one honored rather in the observance than in the breach — to turn the Prince of Denmark's words upside down.

Every alumnus within range of Boston on the evening of June 7 should show up at Symphony Hall and make a real Tech Night of it once again. And don't forget to send in your subscriptions at once, to the Class Committee, 1922, and make the thing sure

THE FELLOWSHIPS IN ARCHITECTURE

On page 219 of this issue announcement is made of two new fellowships in architecture available, if we remember correctly, next year. Technology has few enough scholarships and advanced fellowships for an institution of its size, and so any distinguished addition, such as these, to the list is the occasion for more than usual congratulation. It is only another example of the progress made by the department under its new head, to whom we already owe the great increase in the *esprit de corps*, the new Commons Room, the new professor in design, and finally, apparently, the latest arrangement of the curriculum by which architectural students are freed from the old and onerous requirements of physics and advanced mathematics, and given more time to devote to architecture as a fine art, rather than, according to the old conception, a minor branch of structural engineering.

EDWARD FURBER MILLER, '86

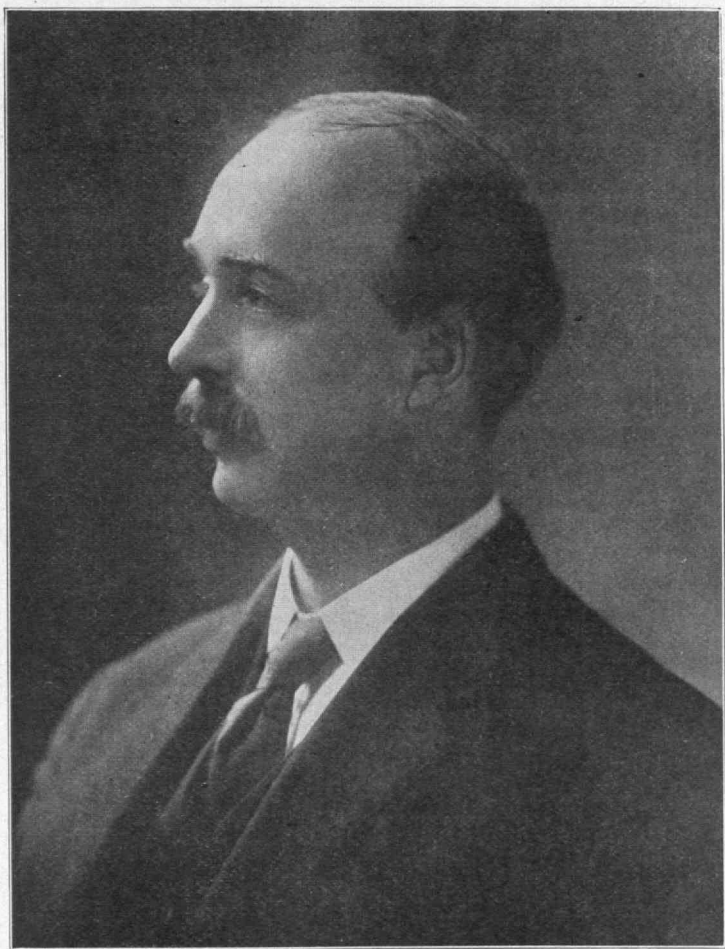
BY PROF. C. E. FULLER, '92

ONE of the most widely known members of the instructing staff of the Massachusetts Institute of Technology, among its students and alumni and in the engineering world at large, is Prof. Edward F. Miller, head of the Department of Mechanical Engineering, at the present time a member of the Administrative Committee and the Chairman of the Faculty. He has been connected with the instructing staff for over thirty-five years, starting as an Assistant in Mechanical Engineering the year following his graduation with the Class of 1886.

He was born in Somerville in 1866 and received the larger part of his early education in the public schools of Cambridge. He prepared for entering the Institute at the Cambridge High School and was admitted in the fall of the year 1882. In those days a large portion of the site on which the Institute buildings now stand was a marsh, the Cambridge side of the Back Bay not having been filled in, and at high tide the water extended as far back as Sidney Street and Front Street, a street a short distance to the south of and parallel to Main Street. The track of the Boston and Albany Railroad running back of the Institute power house, at that time was carried across the marsh land on piles. A point of land, known as Whittemore's Point, extending out into the bay in the vicinity of the site of Building 1 of the Institute, was, at high tide, very popular among the boys of Cambridge as a swimming resort.

The story of Professor Miller's work at the Institute since his graduation with the Class of 1886 is closely linked with the story of the growth of the institution, particularly of the Mechanical Engineering Department. At the time of his promotion to an Instructor in Mechanical Engineering in 1888, plans had been made, under President Walker's direction, for a new building on Trinity Place. This building, afterwards known as Engineering Building A, was completed and occupied by the Mechanical and Civil Engineering Departments in the year 1889. The Mechanical Engineering Laboratories, located on the first two floors of the building, were at that time considered among the finest in the country. In 1892 Professor Miller, who had previously been engaged in more or less general instruction in mechanical engineering, including drawing room and design work, was made Assistant Professor of Steam Engineering and placed in charge of this laboratory.

Previous to this, in the summer of 1889, he went abroad, in company with Professor Schwab, with the American Society of Mechanical Engineers, who were entertained as guests by the French and English Mechanical Engineering Societies. After the final meetings were over he visited, with Professor Schwab, a number of technical schools and



EDWARD FURBER MILLER, '86
Head of the Department of Mechanical Engineering

industrial establishments in Germany. During the trip they were given the special privilege of visiting the Krupp Works at Essen, and on this visit they were entertained and shown through the different branches of the establishment by Herr Zeuner, a nephew of Zeuner of thermodynamic fame. They made similar visits in England and during their stay were entertained by the officers of one of the British torpedo boat destroyers.

As the Institute grew, additional buildings were put up, first Engineering Building B, then the Henry L. Pierce Building. These were followed by a building for the Department of Naval Architecture and the buildings for the Electrical Engineering Department. As these buildings were added, the quarters of the Mechanical Engineering Department were extended also, and the laboratories expanded until they occupied the whole of the basement of Engineering B and Pierce Buildings. With the construction of each new building it became necessary to add to the power plant, from which the heating and lighting was supplied. Under Professor Lanza, who was the head of the Department of Mechanical Engineering, Professor Miller had a large part in planning these extensions to the laboratories and power plant and supervised personally the installation of new apparatus and additions to the plant.

Meanwhile in 1899 he had been promoted to an Associate Professorship in Steam Engineering and six years later, in 1905, was made Professor of Steam Engineering.

As Instructor and Professor of Steam Engineering he made a specialty of boiler design and the operation and design of steam power plants, and soon came to be recognized as an authority on these subjects. The textbook on "Steam Boilers," the first edition of which was written with Professor Peabody as co-author, was published in 1897. This book, revised by Professor Miller several times since, is recognized as one of the leading textbooks on the subject.

His study of boiler explosions, their causes and effects, has led to his being sought as an expert in many legal cases and a very interesting article might be written on his experiences in the courtroom if facts necessarily more or less confidential could be disclosed. His success as an expert, and it is said that no lawyer ever mixed him up on cross-examination, is no doubt largely due to his straightforward purpose in every case, to get the true facts, no matter to what conclusion they might lead.

In 1904 he was commissioned by President Prichett to make a trip to Europe for the purpose of studying the instruction in engineering in foreign technical schools. He visited a large number of schools in England, France and Germany and, on his return, made a report to the Corporation of the Institute on the methods of teaching and laboratory practice which might be of value in the development of courses at the Institute. Later, the more salient features brought out in this report were embodied in the work here.

On the retirement of Professor Lanza as Professor Emeritus in 1911, Professor Miller was made acting head of the Department of Mechanical Engineering and the following year was appointed head

of the Department. At this time plans for the new Institute buildings in Cambridge were being developed and at the request of Dr. Maclaurin, President of the Institute, tentative plans for laboratories, drawing rooms and lecture rooms for the Mechanical Engineering Department were drawn up under Professor Miller's supervision. Various studies, extending over a period of more than two years, were made: and the plans of the Mechanical Engineering Laboratories, Machine Tool Laboratories, Foundry, Carpenter Shop and Forge Shop, as well as the Mechanical Engineering Drawing Rooms, which were finally installed in the new buildings at Cambridge, were largely the result of Professor Miller's efforts. During the erection of the new buildings, at the direction of President Maclaurin, he was given supervision of the installation of all the laboratory apparatus in the Mechanical Engineering Department and it may be added that not the least of the results of his unrelenting efforts, during the two years in which the buildings were under construction, was the installation of the excellent system of lighting in the present third and fourth year Mechanical Engineering Drawing Rooms. To obtain this system in place of a cheaper, and inferior system, Professor Miller was obliged to make a long, strenuous effort which culminated in presenting his case to the President and members of the Corporation, who became convinced of its merits and ordered the system installed. The plant of the Mechanical Engineering Department, generally acknowledged to be the finest of its kind in the world, is perhaps Professor Miller's greatest achievement.

After the death of Dr. Maclaurin in January, 1920, Professor Miller was appointed as one of the Faculty members of the Administrative Committee to take charge of the administration of the Institute until a new President was chosen. He has served continuously on that committee up to the present time, devoting unreservedly of his time and efforts to the work of the committee. Last spring he was elected to the chairmanship of the Institute Faculty, which office he now holds.

Professor Miller has been a member of the A. S. M. E. since 1891 and a member of the American Society of Civil Engineers since 1903; he is a member of the Boston Society of Civil Engineers; a member of the American Society of Refrigerating Engineers and has been a member of the Engineers' Club of Boston since it was founded. He is a member of the American Academy of Arts and Sciences, a member of the University Club, and a life member of the Massachusetts Charitable Mechanics Association. He is also an honorary member of the National Association of Stationary Engineers, this membership having been conferred upon him in appreciation of lectures and educational work among a number of different organizations of this association, to which he had devoted a large amount of time and effort. He has served on a number of different committees of the American Society of Mechanical Engineers, having been a member of the Boiler Code Committee of that Society ever since the committee was started. He is also a member of the main Committee of the A. S. M. E. on Power Test Codes and a member of the individual Committee on Refrigerating Machines and Plants. As a

member of the A. S. M. E. Research Committee on Safety Valves, Professor Miller made an exhaustive study of the operation of these valves, including an extensive series of tests on the relieving capacity of safety valves under pressures ranging from 50 pounds to 250 pounds per square inch. The results of his investigations were first published in pamphlet form by the Crosby Steam Gage and Valve Co. of Boston and later were embodied in the Transactions of the A. S. M. E. He has been director and vice president of the American Society of Refrigerating Engineers and is a member of the Committee on Refrigeration Regulations.

When the State of Massachusetts appointed a commission to draw up a set of rules governing the construction of steam boilers which were later embodied in the laws of the Commonwealth, Professor Miller was appointed as an advisor to the commission and acted continuously in that capacity until the work was completed.

As an exemplification of his aim to always keep in touch with the practical side of engineering as well as the theoretical, he holds a first-class unlimited stationary engineer's license, which he obtained by taking the regular examinations of the State of Massachusetts for engineers of this class in 1897.

In addition to the publications already mentioned Professor Miller has written many articles for different engineering magazines as well as notes on power plant design and on heating and ventilation for the use of students at the Institute.

Soon after the United States entered the World War in 1917 the United States Shipping Board realized that if the ships under construction were to be properly manned, a large number of engineer and deck officers must be trained. Mr. Henry Howard, who had been appointed by the Shipping Board to direct the recruiting of these officers, appointed Professor Miller in June, 1917, to have sole charge of the establishment and direction of a series of schools in different parts of the country for the purpose of giving engineer officers the necessary fundamental training to enable them to operate the engine rooms of the ships; first as subordinates and afterwards as assistant and chief engineers, as soon as the necessary sea experience could be gained. Under Professor Miller's direction thirteen different schools were established, including the one at the Massachusetts Institute of Technology, the others being located in New York, Brooklyn, Jersey City, Hoboken, Chicago, Cleveland, Philadelphia, Seattle, New Orleans, Baltimore, and Berkeley, Cal. At the time of the armistice about two thousand men had received instruction in these different schools and a large majority of these men were commissioned as engineer officers in the United States Merchant Marine.

Besides directing these schools, which necessitated taking care of a large amount of correspondence and a number of personal visits to different parts of the country, Professor Miller himself gave a series of lectures in the school at Technology and wrote three sets of notes in pamphlet form for the use of officers who were being trained. At

the close of the war the original series of schools was superseded by schools at the Institute of Technology, Brooklyn Polytechnic Institute, Tulane University, New Orleans, and at the University of Washington, Seattle, for advanced training in turbine engineering for which licensed engineer officers were eligible. Professor Miller had full direction of these schools until his resignation, September 15, 1921.

During the war, in addition to his work for the Shipping Board, Professor Miller was engaged in confidential work for the United States Army, first under General John A. Johnston, Commandant of the Department of the Northeast, and General Black, Chief of Engineers. He continued this work under Generals Crozier and Ruckman, who succeeded General Johnston in command of the Northeastern Department, up to the close of the war.

Since the war, mainly through Professor Miller's efforts, a Reserve Officers' Training Corps Unit for the Ordnance Department of the United States Army, open to undergraduate students of the Institute, has been established. He has also been largely instrumental in the establishment last summer of the Ordnance School of Technology and the Ordnance School of Application for training ordnance officers of the United States Army in the branches of engineering particularly needed in their profession.

In recognition of his services to the War Department Professor Miller was commissioned a colonel in the Ordnance Department of the United States Reserves on January 14, 1922, an honor rarely granted to a civilian in times of peace.

Mainly through Professor Miller's efforts, in conjunction with some of the Army officers who are attending the Institute at the present time, an M. I. T. Army Ordnance Post has been established at the Institute. This post, to which ordnance officers attending the Institute for various courses and members of the R. O. T. C. are eligible, is a branch of the National Army Ordnance Association and membership in it is esteemed a valuable privilege.

Professor Miller has always been a close friend of his students and has given without reserve his time and strength in work on their behalf. In this direction he was instrumental, a number of years ago, in founding the Student Section of the A. S. M. E., in which he has always taken a personal interest. As a mark of their esteem he has been elected a member of the Phi Sigma Kappa and Theta Tau Fraternities.

While he is a firm believer in the importance of a thorough training in the fundamental theories on which engineering practice is based and that mastery of these is necessary for the trained engineer, Professor Miller has always made it his aim to keep closely in touch with the current methods of good engineering practice. As a result he is able to bring to the classroom a large fund of knowledge, based on his own personal experiences as well as those of others, and to illustrate the application of the principles he is teaching in a very practical way.

— *The Tech Engineering News.*

THE DORMITORY SITUATION

A few facts and figures in connection with the opening of the campaign for more dormitories

LAST fall, lists of questions were given out by the Dormitory Report Committee to the men in the two lower classes in order to find out just exactly what the rooming situation was. An extract from the report is given below:

At the present time only about 25 per cent of the students at Technology are living in places which have any connection with the Institute. There are 200 in the existing dormitories and 700 in fraternities. The others, over 2,500 of them, either commute from home (usually well over an hour's ride and in some cases as much as two and a half hours from the Institute), or live wherever they can find rooms.

That these men are not satisfied with the conditions under which they are forced to live is plainly shown by the answers received on the 900 questionnaires distributed among the students of the two lower classes. From these statistics it was found that 88 per cent of the men living in rooming houses would like to live in dormitories, and it is reasonable to take the two lower classes as representative of the entire student body on this subject.

The reasons for this general dissatisfaction are numerous. The price of good rooms within walking distance of the Institute is prohibitive for most of the students, and while the prices are not so high in more distant localities, necessary carfare, averaging \$1.64 per week, makes the final cost about the same, and here, too, the element of time becomes important. To be sure, there are some satisfactory rooms available, but those are taken to be the ones occupied by the 12 per cent who are apparently satisfied.

Now we come to the lower priced rooms, and here the objections are much more serious. The air is bad, the light usually poor, and often the rooms are dirty beyond belief. Some of the students reported that they found themselves in rooms literally alive with vermin. Bad as these physical conditions are, it is worse that in these localities there is often a pervading atmosphere of immorality. Even though a man is not contaminated, the presence of such an atmosphere is a constant source of annoyance. Under such conditions a man cannot do his best work. Moreover, why needlessly put such temptations in a man's way? Under the circumstances it is remarkable that the standard of morality at the Institute is as high as it is.

The scholastic standing of men now in dormitories is about the same as of those living outside, and that of men living in fraternities is slightly lower, but these groups are doing ninety per cent of the work on the student activities in addition to keeping up practically the same

scholastic record. This means that three-quarters of the students have practically none of this broadening training. This adjunct to a college education is coming to be more and more appreciated, and it is unfair that conditions should keep a vast majority from its benefits. The activities should be a very real part of every student's life, but cannot be as long as the men are so much out of touch with each other.

With these men living in dormitories, more use will be made of the gymnasium and athletic equipment with the resultant building up of physical strength so necessary to the performance of good work. At present these facilities are so inconvenient to reach from where the men live that only a fraction of their value is derived, and the men suffer accordingly.

The only present way of locating a room which is open to the new student, unacquainted with Boston or Cambridge, is through the lists supplied by the Technology Christian Association. While the T. C. A. has done as much as it has been able, the proposition is too big for it to handle. In the first place the T. C. A. has not money enough to pay some one to inspect all the rooms nor have its men time enough to do it themselves. Moreover, as the T. C. A. is run by students, it has no real authority nor power over house owners. When a parent writes to a member of the faculty, asking where his son can secure a room, what can this faculty member say? He does not know of a place, very few students know of places, that can honestly be recommended. As long as the Institute does not supply dormitories for its students, it certainly should make provision for assisting them to find suitable rooms elsewhere.

This would entail a certain amount of trouble and expense, but the Institute owes this much to the parents and to the students themselves. A sub-department under the Dean might handle this work, or a distinct department under the Bursar might be created for it. The duties of this department should not be merely to inspect the available rooms, but it should also get better prices and conditions for the students. By guaranteeing to fill all the rooms in a certain house the Institute would be in a position to demand these things.

Several students living together in such a house would get, to a lesser degree, the benefits of association with their fellows which they would have in a dormitory. Nor would the Institute be assuming any real risk in guaranteeing to keep the rooms occupied, for there would always be a demand for such rooms.

T. C. A. MAKES REPORT ON ROOMING CONDITIONS

Offers suggestions for improvement of present methods of obtaining rooms

THE Department of Room Registry of the Technology Christian Association has issued a report which contains suggestions for improvement in classifying rooms. The report follows:

The work of the Department of Room Registry, as done this year, consisted of examining the former lists of rooms, and sending out cards for information to the landladies listed on them. Advertisements have also been placed in the daily papers at the beginning of the term, and pastors have been asked to inform their congregations of the need for rooms.

From the replies sent in, new lists have been compiled late each summer. Booklets with complete information have been kept in the office for reference, while printed lists containing merely the address and price of rooms were given to the students to take away. The department has also looked after letters in regard to rooms.

Although the work has been conducted in the above manner in the past, and has been done as well as possible under those conditions, there are several disadvantages which need to be remedied.

In the first place, most all of the work is done late in the summer before the Institute opens. As very few students are present at that time, most of the work is placed on the shoulders of the already burdened General Secretary and the stenographers. Moreover, the limited staff working on this problem makes only ordinary listing of rooms possible. The only information furnished is that given by the landladies and there is no opportunity to look up references or to investigate the rooms. The student, therefore, cannot tell whether the room he is taking is what he should have or not.

There is another point to be considered. The lack of classification of rooms and the length of the list to be looked through, together with his ignorance of the locality, are rather disconcerting to the average student, and cause him to waste a needless amount of time. There is also the crowding of the office the first two weeks of school, and the derangement of office work.

As the present system is laboring under the defects mentioned above, the following plan is suggested to help improve the situation. The details are as follows:

The Director shall continue to serve as head of the department all year. In the third term, two or three men could be procured to act with the Director as a committee of investigation, and from these, the Director for the following year could be chosen. The duty of this

committee would be to interview the students residing in them as to living conditions, as well as to look up references given by the landladies.

From the information gathered by this committee, a list of approved rooms could be made up, consisting of all rooms investigated and found satisfactory. The idea would not be to have this the only room list, but a separate list of the other rooms which had not been investigated could be made up, and the student informed that they had not been looked into.

Instead of the present room lists, three booklets containing approved rooms could be printed, one for Cambridge, another for Boston, and the third for the nearer suburbs, such as Brookline, Dorchester, etc., these booklets to have all necessary information in regard to rooms. The rooms could be classified as single, double, or otherwise, and further classified as to price, so that a student could find what he wanted in much less time than is now necessary. The first two booklets might have included a small map and a directory of the streets, and all three could have a card attached to the rear, to be torn off and sent in when room is taken.

Once the system has gotten under way, and a sufficient number of rooms looked into so that the number of approved rooms would take care of the demand, the booklets could be the same each year, which would help to cut down their cost, as it would undoubtedly be a little high at first. Inspection could then be made perhaps every two years to see that condition of rooms was still good.

As it would be impossible to cross out in each booklet the rooms as they are taken, a daily list could be put on the bulletin board. The student would probably know the type and price of room he wished and could check off for himself the rooms under that class which were already taken. This would eliminate the difficulty of crossing out list.

FREE LUNCH DISCONTINUED

THE free cocoa and crackers, which was inaugurated January 3 for the benefit of undernourished students, was discontinued about March 1. Medical authorities had recommended that in view of the fact that they found forty per cent of Technology students suffering from malnutrition, cocoa and biscuits should be available free at the college. Only two hundred students accepted the food, and of late this number dwindled so that most of the patrons were janitors and other employees.

The inception of the free cocoa plan is said to have received the widest and most frequent newspaper publicity of any event in the school's recent history.

COURSE XV LIMITS ITS REGISTRATION

A temporary measure due to overcrowding — news of
Corporation XV and the S. I. E.

OWING to the rapid increase of numbers of students in Course XV to a point where the registration in the course is about one-sixth of the total registration of the Institute, and to protect the real interest of the course and of the Institute from the pressure of students inadequately prepared to take up the work, it has been decided for the present that the total number admitted to the third year of Course XV, inclusive of the three Options, shall not exceed one hundred and fifty students, until the number of applicants with perfectly clear records in the first two years shall exceed one hundred and fifty.

Preference will be given to students who have completed the second-year work at the Institute with clear records in all first- and second-year studies, including entrance records, and to students who have graduated from other colleges with uniformly good standing and satisfactory equivalents for first- and second-year schedules of Course XV.

Students of the second year with deficiencies, and students transferring from other colleges, will be ranked and selected according to their records.

At the same time that the authorities are limiting the enrollment in the course the student organization are making great efforts to make membership in it more and more attractive. Besides the March trip to representative industries, an account of which is printed near this article, Corporation XV, the undergraduate professional society which is chartered and managed as a business corporation, has only recently succeeded in affiliating itself with the Society of Industrial Engineers. Due to the efforts of Corporation XV the society agreed to establish a student branch, something entirely new for that society, and the Corporation will be the first branch to be accepted.

For several weeks Corporation XV has been corresponding with the Society of Industrial Engineers in an attempt to secure a branch at Technology. Previous to this it has not been the policy of the society to have student branches but by a special vote of the directors this organization was created. E. A. Ash, '22, is in charge of the work of organizing at Technology.

The membership in the Society of Industrial Engineers offers a number of advantages: each member will receive a copy of the monthly bulletin; prominent engineers will be sent to address the branches; the employment bureau service will be open to student members; and after graduation the student may apply for transfer to the junior member-

ship without the payment of the usual ten dollars admission fee. Various other benefits of the membership are to be explained to those interested.

The regular membership dues of the Society of Industrial Engineers student branches is one dollar, but the corporation has made arrangements to pay half of this sum, so that the student joining will be required to pay only the remaining half. Only members of Corporation XV are eligible.

PROFESSOR WILSON TO TEACH AT HARVARD

PROF. E. B. WILSON, in charge of the Department of Physics at the Institute, has accepted the position of professor of vital statistics at Harvard, and will serve as a member of the administrative board of the Harvard School of Public Health which is now being organized.

Professor Wilson was graduated from Harvard in 1899, receiving highest honors in mathematics and in general standing. He took his Ph.D. at Yale in 1901, and taught mathematics there until 1907, when he came to Technology as associate professor of mathematics. He was made full professor in 1911, and took charge of the Department of Physics in 1917.

His work at the Institute has been in the field of advanced mechanics, mathematical physics, and aëronautics, a large part of his time being given to very advanced work in the statistical aspects of mathematical physics. Harvard expects that this work will be valuable in the development of the subject of vital statistics, and that he will also be able to make marked contributions to medicine and public health through the application of physics to medical problems.

W. E. FREEMAN, NEW PROFESSOR OF MARKETING

Course XV adds new courses to its curriculum, with a teacher of wide practical experience

WILLARD E. FREEMAN, who enters the course in business administration and the teaching profession as well, with his assumption, at the beginning of the third term, of the duties of full professor giving new courses on marketing and sales management, will bring to his work the knowledge and experience of a man who has since the age of fourteen been in business and who has never attended a college or professional school, except as a lecturer before the business schools of Yale and Harvard. He is also a well-known and sought-after speaker before engineering societies and business organizations.

Like Professor Schell, who has carried the course up to the present term, and following the plan used in many of the other departments, Professor Freeman will work on a part-time basis. He is conducting an outside consulting service and in this way will be able to bring to the students in his course the last word in marketing methods and conditions. Next year he will also offer an option in marketing methods.

Professor Freeman graduated from the Cambridge Latin School and prepared for Harvard, but because of the illness of his mother he was unable to continue his school work and went South with her. Returning to New England a few years later he was employed in a shoe factory as a chief accountant. He later went into the factory as a worker and became the factory superintendent. Because of his health he went on the road as a salesman and later became connected as sales manager with the Howard-Wesson Company of Worcester.

He later spent three years, first in the advertising department and later in the position of superintendent of sales production, with the Norton Company, also of Worcester, and one of the largest manufacturers of abrasives in the world.

The succeeding four years were spent with *The Iron Age* as an associate editor. During the war, Professor Freeman did much through this magazine in the spreading of information which would aid in greater production. It was while working for *The Iron Age* that he came in contact with the Winchester Repeating Arms Company of New Haven, from which company he comes to the Institute.

The work which Professor Freeman did for the Winchester Company is looked upon by many as being the highest type of sales engineering. This company had increased its plant and personnel four times the pre-war size, employing twenty-two thousand persons. When the armistice came it was a problem to profitably use the equipment. After a very extensive study of the market the sales engineering department under Professor Freeman decided on some thirty-

seven hundred items to be manufactured to take the place of the large war output of guns.

As soon as the work of the sales engineering department had become mere routine, Professor Freeman was given the position of superintendent of sales production, where he had charge of the sales forces in the field and the very extensive warehousing system built up by the company.

An hour's talk with Professor Freeman, preferably over the luncheon table, reveals a highly interesting and stimulating personality, with a background of wide and exact experience, an eager conviction in his attitude toward the teaching problem, and a profound sense of the human values in business and student life which makes one believe that "there ought to be a law" (to use a well-worn phrase) that nobody should be allowed to teach till he has put in ten or twenty years in doing something else as hard as he can. (Mr. Freeman has put in about thirty!) Then he will come to his job chock-full of facts as well as theories, enormously interested in the new job and the new approach, and full of a practical desire to relate his teaching and his work with the boys to the real world outside, of business or whatever line you will, as only the man who has been in it and of it can understand it.

Leastways, that is the impression made upon an academic person by the new professor of marketing. He started from the same preparatory school as the editor, which only goes to show how wide an angle two lines can make starting from the same point.

Besides his professional lecturing, Professor Freeman has learned the art of interesting, explaining, popularizing, holding the attention, — in short, the art of teaching, — from years of newspaper work, first as correspondent for eastern Maine for a leading Maine paper and next as editor of *The Iron Age*, these jobs, however, apparently only as interim work in a long and crowded business life. A week's vacation in eleven years, I believe he said! And now he is combining teaching with a consulting practice and having a great deal of fun, apparently, in getting up lectures (brushing up, as he calls it), in getting next to the boys and putting them next, in these earlier stages of building up what he seems resolved to make the best marketing course in America.

That's the way all new professors start, of course, but Freeman has the dynamics to do it if he sets out to. A shortish, stocky man, round-headed, round-faced, bald, spectacles, intent brows, steady and compelling eyes, strong mouth and chin, nervous, alert, very much alive. A pretty steady and consistent talker, anecdotal, humorous, personal, with a long and exact memory, a hopper full of facts, and a scholarly and practical interest in the laws and structures and anatomy of business. One of those men, half business man, half scientist, who are slowly dragging the business of America and the world out of the anarchism and chaos it is in, studying its form and function, striving for analysis and synthesis, for something more than empirical tinkering, moulding and shaping it until, some day, it becomes what it so sadly needs to be, — a technology and a science. — R. E. R.

THE COURSE XV VACATION TRIP

An interesting experiment and a valuable experience in liaison
between Technology and the business world

THE thirty-two members of Course XV who made the three-day vacation trip arranged by Corporation XV, the professional society of the course, proclaim the trip as a great success. They visited four cities, Syracuse and Schenectady, N. Y., and Springfield and Holyoke, Mass., were welcomed at seven manufacturing plants where they were shown every courtesy, visited Union College, Schenectady, and were entertained by Technology Clubs and Technology alumni everywhere.

Arriving at Syracuse, N. Y., on Thursday morning, March 16, the men were conducted through the large plant of the Solvay Process Company. Here the men were privileged to study the processes in the manufacture of soda ash and other calcium products. Following this inspection they were taken to the Merrell-Soule Company's plant by the officials of that company. At a luncheon tendered them by the company they were welcomed to the plant and given the opportunity of viewing None-Such mince meat in process of manufacture. The luncheon was featured by products of the Merrell-Soule powdering processes, such as "Klim," powdered milk, pie of powdered lemon, and other products. An address of welcome was delivered by I. S. Merrell, '96, and an account of the technical processes involved in the manufacture of powdered products was given by Dr. Fleming, research chemist. Prof. E. H. Schell, '12, responded for the Technology men with a speech of appreciation.

Later in the afternoon, officials of the Merrell-Soule Company conducted the party over to the H. H. Franklin Manufacturing Company. At this plant the party was divided into small groups for the purpose of studying the dispatch and control system employed by that concern in producing its cars. This system is reputed to be one of the best of its kind in the world and the interest of the men was evidenced by the many questions put to the guides. Details of construction could be studied at first hand. In the evening the men were entertained by the Syracuse alumni at dinner at the University Club of Syracuse. A reception by the young ladies of Syracuse University, under the direction of Miss Van Allen, completed the Technology tourists' visit. The travelers feel that much of the success of the Syracuse visit can be attributed to the efforts of L. W. Conant, '21.

Friday morning the party was received at Schenectady, N. Y., by P. L. Alger, '15, secretary of the Eastern New York Technology Club, who took the party to the Peacock Inn for a specially prepared breakfast and then to the General Electric plant. The party was con-

ducted through many of the manufacturing and testing departments by engineers of the company who explained the technical methods of testing and manufacture.

G. H. Pfeif received the visitors at luncheon in the company's dining rooms. The afternoon was given over to an inspection of the American Locomotive plant, following which, L. L. Park, general superintendent, gave an informal talk explaining their methods of production and sales, after which he conducted the party to Union College, where an enthusiastic welcome was accorded the men by students headed by F. P. McKibben, '94, professor of Civil Engineering there. The campus was the object of much admiration and the hosts related many of the interesting traditions of the college. Every one took advantage of the swimming pool and were then conducted to a dinner at the college union. Several Institute alumni spoke of their experiences in industry and gave the men an insight into what they must expect after graduation. After the dinner there was a theatre party in Albany. Some of the men attended the closing hours of the New York Assembly.

Friday morning the party was received by Mr. Pollock of the Rolls-Royce Company in Springfield, Mass. A tour of the plant was instructive and the men were impressed with the quality of the workmanship and material. The elaborate tests were the pride of the officials and the object of interest on the part of the engineering students. All men were given a demonstration ride in Rolls-Royce cars, where the marvelous flexibility, speed and riding qualities were demonstrated under all conditions. The Rolls-Royce Co. further extended its hospitality by a luncheon at the Nyasset Club in Springfield. The men were driven to the Club in a procession of Rolls-Royce cars. At the luncheon each man was presented with all the descriptive matter regarding the cars and a large picture of the party which had been taken that morning. Colonel Weiser, president of the chamber of commerce, extended a hearty welcome to the Technology men and expressed gratitude that the men had chosen to visit Springfield. Maurice Olley, chief designing engineer of the Rolls-Royce Company, delivered an address telling of the advent of the Rolls-Royce car in the automotive world and of the obstacles overcome in perfecting what they consider a 100 per cent perfect car. Professor Schell, on behalf of Technology, extended the Rolls-Royce Company the deepest appreciation for their reception and paid a tribute to their perfect hospitality.

Arriving at the American Writing Paper Company's plant in Holyoke a short time later, the party was led through one of their mills where the processes in manufacturing paper were thoroughly explained. Each member of the party was given booklets explaining processes of manufacture and scientific methods of production. In the evening there was a dinner at the Highland Hotel arranged by the Technology Club of Springfield, following which the men enjoyed an informal talk with the alumni in the offices of the Telephone Company. Professor Schell gave an account of the ideals of Course XV and related many

interesting facts about its alumni and their successes. G. W. Hayden, '95, divisional superintendent of the Telephone Company, responded for the alumni and commended the students for the interest they are displaying in visiting industrials, signifying it to be a genuine desire of the student to grasp the opportunity of meeting the alumni and preparing for their future after graduation by studying industrials at first hand.

The members of the party feel that the success of the trip has been largely due to the efforts of R. H. Brown, '22, president of Corporation XV and the Combined Professional Societies, who was chairman of the committee in charge of the trip. He was assisted by four other members of the Corporation, C. G. Malcolm, '22; P. P. Pratt, '23; F. O. Billings, '24; and R. E. Whitford, '24. The following men made up the personnel of the party: R. H. Brown, '22; H. A. Stockbridge, '22; Phillip Caplain, '22; S. J. Henrikssen, '22; A. E. Meling, '22; F. O. Billing, '24; M. A. McClure, '22; H. B. McIntyre, '22; J. M. Goodnow, '22; R. J. Possiel, '24; W. H. Bovey, Jr., '22; R. E. Whitford, '24; C. W. Perkins, '22; B. J. Stevens, '23; L. H. Connell, '22; A. J. Wilson, '23; A. J. R. Houston, Grad.; P. P. Pratt, '23; C. W. Ulanville, '22; Prof. E. H. Schell, '12; L. W. Conant, '21; C. G. Malcolm, '22; C. E. Mongan, '23; H. B. duPont, '23; J. B. Clausen, '24; P. L. Coleman, '23; E. L. Quirin, '24; F. L. Gemmer, '24; L. M. Nelson, '23; E. Pomeroy, Jr., '23; G. T. Welch, '21.

P. P. PRATT, '23,

Director of Publicity, Corporation XV.

MEMBER OF COUNCIL, A. U. U.

GEORGE A. MOWER, '81, of London, England, is a member of the Advisory Council of the American University Union of Europe, and Mrs. Mower is a member of the Women's Advisory Committee. Both attended the fifth annual dinner of the association at University College, The University of London, on February 10.

THE PROBLEM OF THE BETTER STUDENTS

Should we not give our better students a better deal? Shall we aim our instruction at the average or the middle third, or shall we segregate the worst and the best and treat them specifically? Shall we use a shot gun or a rifle? At the Institute, Course VI, as well as the English and mathematics departments, has tried the experiment of credit sections for the best men. The following report on the matter is both valuable and interesting.

THE Committee on Students of Professional Promise believes that there are two objects to be accomplished, namely:

(1) To provide greater opportunity for development for those students who have already demonstrated their ability.

(2) To discover and awaken students of considerable natural ability who for any reason are not making the most of present opportunities.

It is necessary to attempt the accomplishment of these objects without additional expense.

The grouping into sections is usually arranged without reference to the relative abilities of the students. It follows that the scope of the work and the character of instruction are generally such as to fit the needs of the average student. The most capable students are deprived of the opportunity for advancement to which they are entitled and the least capable men acquire but a hazy idea of their subjects.

The slowing up of the best men and the lamentable lack of thoroughness of the less able men is too big a price to pay for the slight advantage that may be gained by the influence of students of different mental qualifications upon one another.

The Committee believes that the segregation of the best students in each subject into one section will provide an opportunity for improvement. This can be done without additional expense wherever there are at least two sections already. It can be done without conflict with the tabular view wherever at least two sections meet at the same hour.

The Committee finds that the segregation of the better students has already been tried out in the electrical engineering department and in the department of mathematics and of English and history. Beneficial results have in general been obtained.

Segregation alone will not accomplish our object. Segregation will, however, invite attention to some of our deficiencies and will provide a starting point for improvement.

The Committee has considered various methods of procedure after the segregation of the most capable students. Among these are:

(1) Cover the same work as at present, but with greater thoroughness and in greater detail.

- (2) Proceed more rapidly and cover more ground in the same time.
- (3) Assign additional work in preparation for advanced degrees.
- (4) Exercise more latitude in the substitution of equivalent subjects at the discretion of heads of departments.
- (5) Substitute a limited number of advanced lectures for some of the regularly prescribed recitations.
- (6) Give special, directed courses of selected reading followed by consultation and resume reports.
- (7) Simplify the subject matter of all courses, reduce the hours prescribed and decrease the number of subjects to be carried simultaneously.

There are disadvantages in each of these methods if carried to extremes. The Committee believes that how we do it is more important than what we do. Different instructors will prefer different methods. Any method having the support of the instructor will accomplish more than a better method indifferently followed.

Care must be taken to obtain the sympathy of the abler students for any changes adopted. Above all, we must avoid a mere increase in the daily grind. The selected student who appears not to benefit should be transferred to a lower section without prejudice. There are many students who receive credit marks by hard work rather than through exceptional ability. Additional work must be given only to students who are qualified to undertake it.

Experience indicates that there are relatively few men of really superior ability. While segregation will be beneficial even with only two sections in any one subject, the benefit will not be by any means as apparent as in the case where there are six or more sections. In other words, about one-sixth of a class will show marked ability and might well be put into a section by themselves; another one-sixth will be noticeably below the average; but there will be relatively little difference apparent among the students who form the remaining four-sixths of the class.

The Committee has made a careful study of the tabular view and finds that segregation can be carried out to considerable length in the first and second years, and in most of the professional subjects of the third and fourth years. For example, there are six sections at the same hour in the second and third terms of the first year in chemistry, mathematics, physics, English and history, so that the best one-sixth of the class could be grouped in one section in each of these subjects without additional expense.

During the later years the tabular view is less uniform, but there are a great many courses in which two or more sections meet at the same hour, in which segregation is both desirable and practicable.

The Committee is not prepared at this time to make specific recommendations as to the methods to be followed after segregation, believing that such methods should be tried as appear most desirable

to the heads of departments and the instructing staff. We do, however, desire to make the following recommendations at present:

(1) Segregate the most capable students in all subjects after the first term of the freshman year, where this can be done without additional expense.

(2) Give more latitude to the more capable students in the substitution of equivalent work.

(3) Appoint a committee to follow up and report to the Faculty the results of the various methods adopted; and to study, among other things, the following questions:

(a) The raising of standards by limiting the enrollment for certain courses already overcrowded.

(b) The establishment of special honor courses.

(c) Degrees with credit.

(d) Degrees in less than the regularly prescribed time.

(e) The activities and benefits of national and local honor societies.

(f) Honors and prizes.

(g) The ranking of students in order of merit and the publication of grades.

(h) Scholarships and financial aid.

(i) Assistance in obtaining positions after graduation.

(j) Intelligence tests and other methods for determining quickly the relative ability of a student and his special aptitude for different lines of work.

(k) The accomplishments of graduates, their needs and limitations.

T. H. DILLON,
For the Committee.

LETTER FROM C. S. DUNPHE

IN the '89 class notes in this issue will be found a letter from C. S. Dunphe, which gives an interesting account of a trip to the Baltic ports. This notice is to call the attention of others who may be interested, besides Mr. Dunphe's classmates.

THE U. E. B.

THE Undergraduate Employment Bureau has been, for several years, the medium through which worthy students have found it possible to remain at Technology. After these men in dire need of financial assistance have been placed in positions that defray their living expenses, this Bureau endeavors to locate openings for other men wishing to earn their spending money. It also finds a few jobs of a technical nature for men looking for practical experience with which to supplement their work in the Institute.

Under the directorship of Edward E. Bigelow, '22, and the coöperation of Mr. Wallace M. Ross of the Technology Christian Association, this Bureau has had a very successful academic year in spite of the adverse business conditions. Spare time chore jobs have been fewer this year than ever before; but practically all of the needy men have been placed as waiters in private boarding houses, or in homes where they could do odd jobs in return for a room. In this connection let me give one example that illustrates the spirit of Technology. A man living in Salem, Oregon, wanted to enter Tech; but besides having his tuition guaranteed, his total resources consisted of only \$50. However, after riding the rails for ten days he arrived in Cambridge with \$10 of the original \$50. Then, through the assistance of this Bureau, he obtained a "room for services," and also a position as waiter in the Walker Memorial dining service, thus paying his living expenses entirely. This is perhaps the most glaring example of its kind, but there are many other worthy men who have received similar assistance.

The above may give the impression that the Director of this Bureau and his three associates are able to handle the employment situation alone; but that is not the case, especially in regard to summer work. There are a large number of men in the Institute that depend on the financial returns of their summer's work for the major part of their following year's expenses. Others are anxious to get employment that will give them practical experience along the lines for which they are studying. This combination presents too big a task for the four undergraduates on the Bureau to successfully accomplish alone. Therefore, it is up to Tech graduates to get behind the men on this Bureau and notify them of any summer vacancy that a Tech man could fill.

R. L. HOLT, '24.

FOREIGN STUDENTS AT M. I. T.

The census of this year's interesting facts and figures

THE most spectacular construction job the world has ever known ended in a Babel of Tongues, which was probably the time when engineering first became associated with cosmopolitanism. Since then engineers have been among the first to go among the waste places of the earth and they have thus kept up the tradition. It is not surprising that it should spread to the engineering colleges. If students at the Massachusetts Institute of Technology, assembled in convocation, were suddenly to burst into their native tongues, it would create considerable babel, for thirty languages would be represented, not including Sanskrit, the other dead languages and the Morse code, which could be brought into action if the occasion demanded.

Nearly ten per cent of the Technology student body of 3,500 is composed of students who come from places other than the 48 states of the Union. One-fifth of these foreign students come from China. It is fortunate that the Chinese so readily adopts the manners and customs of the Western World, for if the sixty odd Chinese students were suddenly to put into practice the Chinese custom of studying aloud, there might conceivably be quite a fair imitation of the scene at the tower of Biblical history.

Canada for years kept pace with China in the number of students sent to the Institute, but this year the northern neighbor has fallen far behind. Canada's representatives number 39, not two-thirds of the Chinese total.

The self-sufficient attitude of Japan is well demonstrated by a contrast of the number of Japanese students with the number of Chinese. Japan surely is not less appreciative than China of anything of such military value as an engineering education, but only 6 citizens of the Island Empire are studying at Tech. This is only one-tenth the number of Chinese, and would argue that Japan finds her schools quite as well adapted for teaching engineering as those of America.

Third in number of foreign students is Norway, with a total of 19, 9 of whom are from Christiania.

Strange to say, the fourth country in point of numbers is Russia, whence come 14. This is the largest number of Russian students M. I. T. has ever had. In the years before the war and during the war, until the Red uprising, the number of Russians averaged about two a year. After the revolution it seemed that the aristocracy did not find it so convenient to study in their own national universities, for the next year the number at Tech had jumped to 10. Now it is 14.

America's possessions are all represented. There are 12 students from the Philippines, 4 from the Hawaiian Islands, and 1 each from

Alaska and the Canal Zone. Cuba, on which Uncle Sam is still keeping a wary eye, has 8 citizens at the Institute, and Porto Rico, which is also under the same restraining hand, is represented by 6 men.

Singularly enough there are at Tech as many citizens of Siam as there are of England — 8, to be exact. However, England's total does not include 1 student from Scotland, and 1 who claims the Irish Free State as his home. Nor does it include 5 students from British India and 4 from British South Africa.

South America recognizes Tech's place in engineering education. There are on the rolls 9 students from Uruguay, 6 from Chile, 7 from Argentina, 5 from Brazil, 3 from Peru and 1 each from Colombia, Paraguay, Bolivia and the Dominican Republic. Twelve Mexicans have chosen to study engineering here.

Turkey and Bulgaria, enemies of the United States during the war, each have a citizen on the Tech lists, as have Serbia, Rumania, Asia Minor, Albania, Palestine and Czecho-Slovakia. Of the Allied nations, France has 3 students, Greece 3 and Italy 1. One student claims Tahiti as his home, another Korea, and another the Danish West Indies.

Although one student in every ten is from outside the United States, Tech men get along well together, each respecting the other's viewpoint. Once in a while, however, lack of thought causes a slight misunderstanding as when an artist attached to *Voo Doo*, the Tech comic monthly, portrayed a smiling, pigtailed Chinese, with the admonitory caption "Get the Voo Doo Smile" He was immediately pounced upon through the medium of the Institute daily by a committee of indignant Orientals, who protested that the pigtailed Chinese is a creature of the past, and that the use of the pigtail in a drawing is an insult to the Chinese people.

The artist apologized and said that he drew the offending pigtail because the public had become used to thinking of the pigtail symbol and that he needed it to show that what he had drawn "was a Chinaman." The next issue of the paper carried the letter of yet another Chinese student, protesting vigorously that the term "Chinaman" is an insult to his race and that the term should have been "Chinese."

In another case a high-caste native of India found difficulty in getting a room in the districts where there exists a prejudice against negroes. He refused to live in the so-called "negro district" and was forced to go several miles into the suburbs to find a family cosmopolitan enough to understand his position.

ACTIVITIES AND SCHOLARSHIP

IN 1915, Professor Humphreys in an article in the *TECHNOLOGY REVIEW* analyzed the scholastic standing of the students at the Institute grouped under various classifications. He found then that men on the publications — only *The Tech* and *Technique* were in existence — and in athletics stood well above the average for the whole student body, while the musical clubs, along with devotees of chess and wireless telegraphy, ranked below.

Just now he has again compiled a list, which is of even more than ordinary interest, in comparison with his conclusions of seven years ago. His figures show that as compared with the general average, represented by the number 183, the rank of men engaged in activities is 190. Here is his complete list:

<i>Activity</i>	<i>No.</i>	<i>Stand- ing</i>
Bench-Mark.....	8	213
<i>Tech Engineering News</i>	42	210
"T" Team Men.....	190	195
<i>The Tech</i>	41	192
Managerial Positions.....	27	192
<i>Voo Doo</i>	21	189
Professional Societies and T. C. A. (Officers).....	57	188
Ex-Officio Institute Committee.....	17	187
<i>Technique</i>	26	185
Class Officers, Institute Committee and Dormitory Committee.....	58	182
Tech Show.....	64	177
Musical Clubs.....	43	174
Total.....	594	190
Whole Student Body.....		183
Men in Fraternities.....		177

This subject of the relation of extra-curriculum activities to grades is one of perennial discussion. Alumni, professors, and college presidents marshal their facts and figures, set forth their views and arrive at startlingly varying conclusions. No wonder the average man is mystified and alarmed watching such a battle of the giants. We dare not presume in the face of such conflict of weighty authority to assert that these figures prove that the man who makes the Bench-Mark or the Musical Clubs will be an engineer while the Brown-bagger — pardon the word; it refers to mental, not physical attributes — will always remain an engineman. They are however significant, tending to show that the man whose interest is entirely absorbed in rotating vectors

and dissociating ions does not stand as high, even in his studies, as the man of broader interests. Remember, too, that these standings are weighted, making due allowance for hard and easy courses, and cannot be discredited on the ground that men in activities in general carry less work. So here we are with official figures to back us up able to point a moral even to the H chasers. — *The Tech Engineering News*.

SCHOLARSHIPS IN ARCHITECTURE

Competition for two scholarships

Two scholarships of three hundred dollars each are offered in the scholastic year of 1922-1923 for special students in the fourth year of the course in architecture at the Massachusetts Institute of Technology. They will be awarded as the result of a competition in design under the direction of the Committee on Design of the Department of Architecture. The competition is open to citizens of the United States of good character, who are between twenty-one and twenty-eight years of age, and who have had at least two years of office experience. Competitors must, however, present satisfactory evidence of a knowledge of descriptive geometry.

The competition will be held in July, 1922. Competitors are allowed to prepare their drawings wherever conditions conform to the requirements of the committee, but these drawings must be sent to Boston for judgment. Applications should be received before May 15, addressed to Prof. William Emerson, 491 Boylston Street, Boston, Mass.

A CORRECTION FROM THE M. I. T. RADIO SOCIETY

THE following letter speaks for itself. The article referred to was copied by the REVIEW verbatim from the *Tech*, to which the REVIEW naturally turns as its authority for undergraduate news. The REVIEW expresses its regret, of course, that it has done its part in giving wider publicity to an error calculated to hurt the feelings of other institutions. It is only fair to say, however, that it believes that this kind of error is of rare occurrence in the *Tech* and that, in general, its news about the Institute may safely be followed.—*Editor*.

Editor, THE TECHNOLOGY REVIEW:

An article in the last issue of the TECHNOLOGY REVIEW entitled "Radio Society Makes Best Transatlantic Tests," has been called to my attention. On behalf of the Radio Society I wish to express the sincerest regret that such erroneous and misleading statements should have been published.

The Technology Radio Station (1 XM) was heard on two successive nights at Ardrossan, Scotland, by Paul Godley. The most successful station, however, was undoubtedly 1 BCG at Greenwich, Conn. Mr. Godley was an American with American receiving equipment, sent over by the American Radio Relay League.

The disparaging comparison with Harvard is especially to be regretted. As a matter of fact, this station was not in actual operating condition until after Mr. Godley had completed his tests.

We are at a loss as to the origin of these statements and wish to declare most emphatically that the Radio Society was unaware that such an item was to be published.

We would be very grateful if this correction could be given a prominent position in the next issue of the REVIEW.

Very truly yours,

FULLERTON D. WEBSTER,
President M. I. T. Radio Society.

March 27, 1922.

KEEPING UP WITH THE PROCESSION

BY LEONARD METCALF, '92

The following paper, given by Mr. Metcalf before the Senior class in Mechanical Engineering and reprinted in the "Tech Engineering News," is of quite as much interest to any Tech man graduated during the last five years as to the fledglings.

AFTER the Institute, what? Have you thought of that subject really seriously, or are you only drifting? I assume that you would not be here if you did not have ambition; but what is your ambition? Are you looking forward to burning your books and finding a job that will pay you as much as possible? Are you planning to follow your father and "go him one better"? Are you out for adventure; or have you watched the world's leaders, the workers of the race, and planned your campaign along definite lines to broaden your vision, your experience, and increase your ultimate value by work which will count in those directions, rather than simply in the direction of increased income; by study of books and current literature; by contact with bigger minds, and by observation and comparative analysis of your work and that of others about you? You cannot float for long. It is either a case of sink or swim. If you try to float, the lack of exercise will let the water chill you. You will get the cramp and sink. If you swim, will you be content to paddle around, or will you race your competitor?

The field is a broad and attractive one. If you have any strong bent and are wise, you will follow your bent. Broadly speaking, there lie open to you, professional, administrative and operating work with existing enterprises; purely professional work; teaching and editorial work; and invention.

Your first decision will be as to whether the professional or commercial and administrative side of the problem interests you most. Both are attractive and afford equal opportunities. It is essentially a question of preference, though your preference may be limited by opportunity. In the first, you deal with science; in the second, with men. If you select the professional field, then you must decide whether it shall be that of general practice or of practice in the field of a going concern. The former is more likely to lead to greater adventure and breadth of information, but also to the itinerant life of the professional hobo, so to speak; the second, to a more normal though perhaps more restricted life; but no man is free. If you select the administrative or operative field, you will work with an organization. You may do so in the professional field, but everything will be viewed from the impersonal view and demands of the organization. Relatively, so few enter the field of invention, teaching, and editorial work, attractive as they may be, that it is not necessary to dwell upon them in this discussion.

You can well afford to spend the next ten years, or thereabouts,

in gathering breadth of experience, more or less regardless of your compensation during this period. The broader and deeper the foundations which you lay the more likely your final structure will be to develop fine proportions.

In selecting the individuals or the organizations with which you may choose to work it will be advantageous for you to consider not only the kind of work but the character of the office, the *esprit de corps*, the attitude of the employees, and the opportunity for observing the work of others, as well as playing your own part. You have had sufficient experience here in your college athletics to know the advantage of team-play. In cold-blooded business it is not only advantageous but essential to develop it, and the lesson taught by "The Three Musketeers" shows clearly the greater pleasure which you will get out of life if you lead it with the idea of helpfulness to others always clearly in mind.

No man should be ashamed, even with the training which you have behind you, to begin at the bottom, and every man who has been "through the mill" recognizes the strength which comes from having carried his burden throughout the path traveled, and the advantage of occasionally helping the other fellow with his pack.

In stepping forward from the rear rank to the front rank, or from one position to another, you will be confronted with doubt as to whether it would be wiser to go or stay. If every time a doubt enters your mind you worry about it, you had better stay where you are. But if you think that every time it appears you can dispel it, you had better go, because you will be able to forward and develop both yourself and the business.

When you leave the Institute you will not be likely to establish your own office immediately, because you have not yet had the experience which would make this advantageous, but I wish to point the way, and to tell you a little about the general administrative problem as experience has shown it to men who have succeeded.

There are two general methods of administration, one to build up the strongest organization that you can, even at the risk of being surpassed and elbowed out of it by better men; the other, to build up an organization of good fellows with cramped initiative.

If you pursue the first course your possibilities will be limited only by your success in judging and picking your associates and your staff. You will continue to grow and broaden, and you will experience the keenest of pleasures, that of constant intellectual stimulus. You will find opportunity to see more of life and nature, through having associates strong enough and trained enough to bear your load when you are absent. If you pursue the second course, your position may be safer from the point of view of permanency, but your output will be far more limited, the *esprit de corps* of your organization probably lower, and you will be constantly in danger of nervous wreck if your business grows and prospers. The leader sees what should be done and finds a way. The less successful man thinks first of safety and wonders what can be done.

If you examine organizations you will find that they have not grown over night; that they are the result of careful thought and planning. No mill, no business organization, can double its output quickly and maintain its old efficiency. The human and psychological factors are too important, the necessary checks and counter-checks too numerous, the inertia of the new idea, the influence of new conditions and of new environments, are all too great. You must know your men as well as your machines, and must fit the one to the other.

What has made the J. P. Morgan organization so strong for so many years? "Money," you say. No, far from it, — brains. It is the fact that Morgan had the shrewdness to see that continuous success was to be had only through periodic revitalization of his organization. He was in the favored position of being able to meet and judge of the men in the banking field. Again and again he drew into his firm, new men, the ablest men that he could find; men drawn from the country to the cities, and often from the remote sections to the center of the financial world; men of initiative, of vision, of character and of experience. The pace traveled was terrific, the responsibility which he threw upon them was tremendous. A decade was perhaps the usual limit of the individual, and then he retired with his stake, a handsome one, of course, for the service which he had rendered was great, and he was succeeded by a new partner with fresh incentive and power better attuned to the demands of his day, who went ahead under full steam. No wonder that under such a policy J. P. Morgan & Company have held their own.

Study, if you will, one of our most illustrious groups of men, making up Stone & Webster and its allied enterprises. I remember them when they were three young engineers just getting a foothold, who had the vision to see that there was a gap between the investor and certain public needs, which they could bridge. The bridge which they designed and built was strong, economical and well adapted to the traffic. It inspired public confidence, and, as the loads which it was called upon to support grew, they stiffened the flow, then the girders, then rebuilt the structure again and again, to carry the increasing loads and to keep it well adapted to its work. They, too, studied their problem; they anticipated the conditions before they were faced with them. They did not wait for failure. So they have made a record of which any man might be proud.

Let me contrast for you two examples of the effect of difference in point of view with regard to administrative organization methods already referred to. One, of the man who calls to his aid the strongest men that he can find, who studies his problem as one of research, who is beloved and respected by his fellow men, and who has made a wonderful record in the civil and mechanical engineering and in the insurance fields; the other, of a man who kept his knowledge to himself, surrounded himself with a loyal group of employees, rather than with associates, and who also left a record of splendid engineering service, but not of an organization which could carry on his work after he was

gone. Each a producer, each a master of his subject, but with this striking difference, that the first became a leader of men, generous, to his confreres and assistants, sought by the younger as well as by the older men; the second, isolated, bitter, unrecognized, and unsought by his professional brothers.

The first may be known to you, — John R. Freeman, of the Class of '76, — president of the largest group of Manufacturers' Mutual Fire Insurance Companies, consulting engineer on the Charles River Dam of the Metropolitan Water Board of Boston, on the Greater Water Supply of New York City, on the Hetch-Hetchy project of the city of San Francisco, on the rebuilding of the Grand Canal and control of floods on certain of the large rivers of China, and on many other projects; a past president of the American Society of Mechanical Engineers, and at the moment president of the American Society of Civil Engineers. He has commanded the confidence of the financial world, and is known by engineers as one of the ablest of our investigators of special engineering problems. This means that he is a master in the field of applied science, and knows the importance of the financial side of the problem.

The second is unknown to you and to this territory, no longer living, but a very able man in his time, who has left a splendid record of engineering service behind him. The keynote to his administrative views was given in the comment made one day by him to a fellow engineer whom he was showing over some of his large works, when, after meeting and chatting with one of his men, he turned to his friend and said: "That man is most useful to me. He does exactly as I tell him." He valued the ability to follow more highly than to initiate.

What has lain at the root of Freeman's success? Indomitable work, an open and acquisitive mind, character, courteous relationship with other men, and generous recognition of their worth and work. No wonder that he is respected by other engineers. And with the other man, what was the cause of his failure to receive greater recognition from his professional brothers? Professional jealousy and failure to stimulate, encourage and applaud the advance of those about or under him, and to give credit where credit was due.

To what was, or is, Carnegie's, Schwab's, Vail's or Stone's success due? It is due to work, to knowledge of men, to vision and to character. What, then, can you do to broaden your outlook and your prospects as you enter your life work? First, get an aim in life, if you haven't one already, and with it a hobby to ride. Second, study men. Third, don't burn your old books, but look upon them as friends in time of need; rather, get more books and study them, that you may keep pace with progressive development. Fourth, keep up with current technical literature, particularly in your own field, and broaden your field as much as you can; follow Roosevelt's lead in making it a point to do a bit of good reading daily, to come into contact with a better mind. Fifth, join and take an active part in the proceedings of some professional society — one working in your chosen field — to broaden your interest,



WILLIAM EMERSON
Head of the Department of Architecture

information and acquaintanceship. Sixth, interest yourself, as far as circumstances will permit, in public service work, for it will give you a new point of view and a wider circle of friends and acquaintances having different interests from your own. Seventh, keep an open, acquisitive mind; beware of your mental attitude, and let it always be constructive and not destructive in its influence — any man can criticize, but the percentage who can build up and better existing conditions is small.

It has been my good fortune to be more or less closely in touch with various technical societies in the past, and to know their activities and aims. They offer you advantages that you cannot afford to ignore.

Finally, be sure that you do not overlook the effect of personality upon success. In professional, as in commercial dealings, personality counts. Men like to do business with men whom they like and whom they remember because they liked and respected them, as well as because they recognized their technical attainments. Luck is rarely a determinative factor in man's success. Your future will depend upon alertness, steadfastness of purpose, hard work and straight thinking. No influence can make good the lack of these. The fact that you have survived in the intellectual struggle of the four years of this institution is to your credit, but you will find that this struggle is but the beginning of a yet greater struggle for higher goals commensurate with your greater strength. Face the struggle, then, with an open mind, with determination and with a smile on your face, and you will reach your goal. I wish you Godspeed.

M. I. T.

Come, raise a song of M. I. T.
And let it ring right royally,
With mighty cheers like ocean's roar,
For our dear home on the Cambridge shore.

Chorus

"M" is for Mass., for her we root;
"I" for the dear old Institute;
"T" for "Tech," Technology (*you see*)
Now all together — M. I. T.

Unfurl our colors here today,
Cardinal red and silver gray.
Our flag to all good courage brings,
So join with us while old "Tech" sings.

— ARTHUR E. HATCH.

Providence, R. I.

A CRITICISM AND AN ANSWER

The following "Uncle Dudley" editorial from the "Boston Globe" deserves careful reading. It is a philosophical criticism, based upon a principle and not upon a detail — and such be rare nowadays.

The answer from the "Lounger" column of "The Tech" deserves reading as well. Written according to the tradition of the "Lounger," in a lighter, sometimes even in a humorous vein, it puts up a pungent argument, even though it misses, or perhaps ignores the basic significance of Uncle Dudley's position.

THE MISSING ARTICLE

GRAVEN on the marble chimneypiece in one of the Technology buildings across the Charles is the motto *Mens et Manus*, "Brain and Hand." It is a good motto for an excellent type of education. But there is more to education than mental and manual skill.

That third something is defined in the annual report of the Boston Art Museum: "When, in the welfare of the world, has not the spirit been greater than the body? Modern education is largely scientific or commercial. It is utilitarian as distinct from spiritual. This is the education of the great technical schools and often of the great colleges of the country, and to a large extent of the preparatory schools. It is an education of exceeding value. Yet to my mind it concerns itself little with the greatest element in the makeup of a man, the spirit."

This is more than mere high-falutin. It is plain sense. Our race — the Yankee, Anglo-Saxon, Nordic: call it what you will — tends to be primarily a race of mechanical inventors, perfecters of machine technique, men of action, doers rather than thinkers. We produce, in proportion, surprisingly few creators of the things of the spirit: poets, artists, philosophers. This fact utters itself in a picturesque and numerous tongue.

A lecturer is addressing an assemblage of business men. You are startled and intrigued to find that he knows a curious and profound truth of human relationships, namely, that he who would spread new ideas can do so most easily and rapidly by first making himself personally liked. People may not like his doctrines, but if they like him personally well enough they will end by taking his doctrines on trust. This is, of course, the truth that only exceptional individuals are ruled by reason, the masses of mankind being swayed by emotion.

Now, observe how the lecturer phrases this truth: he calls it "selling personality." He falls back upon the current jargon of commercial salesmanship.

Another curious, if somewhat extreme, example of this jumble of education and commerce cropped up in the news of last week. A former professor of psychology in a great university of the Middle West was

arrested in Texas. It appears that he had, by his scientific studies of how the human mind works, figured out a system of appeals for investment money at which the average reader would almost certainly bite. And bite they did, in lucrative numbers.

This single case is, of course, no reproach against scientific education in general or psychology professors in particular. In fact, this professor's offense is mild, picayune and piker, compared to the bloody uses to which science let itself be lent during the late unpleasantness. The point is that the spiritual element was sorely lacking in the scientist who would exploit his technical knowledge of average human brain processes to clean up in the investment market.

Across the aisle in a suburban train you hear the words "symphony orchestra." Your ears elevate. "Who would there be in this railroad car who cares anything about a symphony orchestra?" The next words wafted across the aisle are: "Concerts by wireless." Oh! It is not music they are interested in, but science. Then these words float over: "It's only in its infancy. The stock is sure to boom." So that is it! They don't even care about science. All they are interested in is commerce.

Well, commerce is all right as far as it goes, and so is science. But neither goes far enough. Look at the Technology buildings themselves. They are a symbol of our entire modern civilization. Their façade is imposing architecture, the inspiration of which is borrowed from Greece by way of Rome. Behind this façade is a modern machine shop. That is us. We can produce the machines. We cannot produce the art. That we have to borrow from a civilization which, supposedly, perished two thousand years ago. Yet its spirit lives. Are our machines an art? They are an art of material, not of spiritual, development. And how this our art of mechanical technique may leave us spiritually impoverished if not materially ruined in the end is hinted in the closing sentences of Mr. James Morgan's dispatch from Washington, setting forth the weakness of American statesmanship at the Arms Conference:

"At the base of American weakness in diplomacy at Paris and in Washington is the universal American fear of failure. The foreign delegations sensed this at once. They make no bones of playing on it. This national passion for success at any cost, even if only an apparent success, plagues our diplomacy. If our delegation only knew and if the other delegations knew that we, the American people, would rather lose right than win wrong, courage would take the place of compromise and the conference would be a success if it failed."

The question is, of course, whether we, the American people, as a people, would indeed rather lose right than win wrong. That would not be in keeping with our popular success-worship.

"Leave no articles in the car," bawls the conductor.

Suppose, when we get home, we find that the article we left was our soul.

UNCLE DUDLEY.

RIPOSTE BY "THE LOUNGER"

IN LAST Monday's issue of the *Boston Globe*, poor, doddering old Uncle Dudley, the famous editorial writer, laid aside his cane and false teeth, and took a surprisingly lusty shot at the chin of our dear old Alma Mater. The Lounger personally believes it highly indiscreet for one of Uncle Dudley's generation to indulge in such gymnastic evolutions in these twentieth century days, particularly when he takes on for his opponent Kid Tech with a record of so many one-round knockouts.

However, among other things, the old gentleman says we Tech men are soulless, and though he admits that we have a magnificent façade in Building 10, he says the inspiration for it was borrowed from Greece by way of Rome, and that back of the elaborate façade is a modern machine shop.

If Uncle Dudley is merely generalizing, and wailing that the world is wrong, the Lounger will merely put him down as "one of those birds" and forget about it. If, however, being presumably himself an A.B. man, Uncle Dudley is making a comparison of engineering and liberal education, with results derogatory to Technology—

Well, let's have your glove, Uncle, old top. One must observe these little Marquis of Queensberry courtesies.

One gathers from Uncle Dudley's column-and-a-half spasm that the dear old soul believes liberal education is to a man's life as fertilizer is to a garden,—that it makes life richer and more fruitful. The Lounger agrees with Uncle. In fact, the Lounger thinks the analogy is almost complete.

However, fertilizer is not all that is necessary for a garden. There is the back-breaking pick and shovel work of keeping the ground broken up and free from weeds. It is this type of training that Technology gives. Both types of education are necessary. No good farmer would ever consider making a garden without fertilizer, and likewise no good farmer would ever consider making a garden without performing the physical labor of keeping it up.

The Lounger believes, however, that the fertilizer can be picked up here and there, by means of (to mix metaphors in a most excruciating manner) by means of reading, travel and conversation. But no man ever heard of a preparation which could be sprinkled on a garden to keep the ground broken up and the weeds discouraged.

In the midst of his digs at practical science, Uncle Dudley sighs for appreciation of the Symphony Concert. Well, without practical science a Symphony Concert would probably be more interesting, but it wouldn't be half so esthetic—whatever that is. Instead of the delicate and beautiful instruments of today there might be a clothes line strung on a barrel head, with a barrel-head drum obbligato for variety.

It would also add to the picturesque qualities of the Symphony if the auditor had to sit on a snow bank in Grant Gately Square, instead of in the comfortable hall, built by practical science. Then, too, animal

skins wouldn't be as cumbersome as clothes, and if there were no books one wouldn't have to read such things as "The Outline of History" and "Main Street," just to keep up with the times.

The Lounger believes Uncle Dudley to be right in his plaint, but, being a good Technology man it would never do to let him get away with it. So, having done his duty, he will draw obviously but gracefully to a close.

Uncle Dudley himself closes by saying something about the conductor bawling "Leave no articles in the car," and then our getting home and finding the article we left was our soul. If places like Technology were abolished there wouldn't be anything of the kind, for there wouldn't be either car or conductor. If there was any cry it would be:

"Hey, mister — you dropped something."

THE LOUNGER.

INSTITUTE OFFERS NEW RADIO OPTION

Communication engineering course to be opened next fall

BEGINNING next fall, the Electrical Engineering Department will offer to the students of Course VI a new option to be called Communication Engineering. Subjects in this option will be the same as those in Course VI up to the end of the sophomore year, after which studies relating particularly to the subject of communication will be taken up. The department states that problems of communication, both by wire and wireless, give very largely applications of mathematics. The new option aims to make men experts in the subject from a mathematical standpoint, and not as operators.

The three main subjects now taken in Course VI which will be omitted in the new option are Heat Engineering, Hydraulics, and Engineering Laboratory. In place of these, Communication Engineering I, II and III, and Communication Laboratory I and II will be given. During the last two years nine hundred and twenty hours will be spent on these five subjects, but it has not yet been decided exactly how the material will be divided among them.

The new option will not be open to every one in Course VI, but only to the men who show high ability in Physics, Mathematics and in Principles of Electrical Engineering 600. It will contain such a large proportion of mathematics that men who are not unusually good in this subject could not hope to pass the course, and it is for this reason that such a high standing is required for entrance.

Radio amateurs who have been looking for an announcement of a course of this kind at the Institute are expected to be disappointed by these high entrance requisites, but the course was not designed for elementary but rather for advanced work along electrical communication lines. *L*

THE LIGHTER SIDE OF TECH LIFE

Recently there have been appearing in the Boston Globe a series of "stories" (news articles) apparently by an undergraduate, giving in a very complete and amusing way accounts of things that happen among us, or that we are interested in, the sort of things that usually do not get into the paper. We (editorially speaking) think they are pretty good. We hope they will give the old grads a picture of what goes on, as it strikes a keen and humorous observer. — Editor.

TECH WANTS A NEW SONG — STEIN SONG TOO PAINFUL

ONE more pernicious effect of prohibition.

Tech students no longer recognize the "Stein Song!"

A competition has been started to produce its successor.

The "Stein Song" is the "Fair Harvard" of Technology, and for many a college generation — as college generations are counted — it has been sung and honored wherever Tech men have got together. It is one thing which has never been missing at official function or informal reunion.

Even at the most recent alumni reunion, held a week ago, the last event of the program was the singing of the "Stein Song." Every one present — professors, engineers, statesmen, bankers — all rose in honor of the famous old song, and sang.

Now it must go. Since Volstead got in his deadly work, Tech students refuse to honor the "Stein Song" or to recognize the propriety or appropriateness of the stein as a symbol.

Tech does not have a large number of rules to be obeyed by freshmen. The first-year student is not required to wear a little green hat, use back doors or wear loud neckties. A freshman may smoke, if he choose, and to speak to a co-ed in the Institute corridors does not bring down on his head the wrath of the fearsome sophomores. The upper classes realize that the lowly fresh is carrying a man's load of studies, and they treat him as a man.

However, one rule that has always been promulgated, to be obeyed implicitly by freshmen, is: "Whenever and wherever the 'Stein Song' is played or sung, you are to rise and remove your hat."

The "freshman bible" — a handbook which is published for new students by the Technology Christian Association — is used by the freshmen as a guide in their daily life. The book tells them something of the history of Tech, and its traditions. It helps to initiate

him into the social and scholastic life of the Institute. It gives him a half dozen rules for his conduct during that trying period, the first few months in strange surroundings. Most prominent of these rules is the rule to stand up and remove the hat when the 'Stein Song' is played or sung.

But no more of this. Placards in the Tech corridors read: "Get your name in the Hall of Fame; write Technology's new *Alma Mater* song."

In the old days, before the correct definition of college became "A place to get an education," the stein and the "Stein Song" occupied an honored place. The stein was more than a cup — it was a symbol of the good-fellowship which is as native to a college as the actual studies.

Now the stein has fallen from grace. With the adoption of the eighteenth amendment the stein has become, as far as law-abiding citizens are concerned, a mere parlor ornament, a receptacle for pins and old suspender buttons, a collector of dust. No one would have the heart to drink water out of a stein, so nowadays it just lies around the house. It is the skeleton at the feast — with the feast removed.

With the fall from grace there is the inevitable defection of good friends; a sign at the entrance to the Tech buildings reads: "Will YOU be the author of Technology's *Alma Mater*?" A prize of two hundred dollars has been offered for the best Technology song which is written this year. It is planned to offer such a prize each year for the next four years.

The four songs selected in this way will be then judged, and the best will be taken as the official song of Technology, according to present plans. The two hundred dollar prize is being given this year by the Tech Show, the Tech Musical Clubs and the undergraduate newspaper, *The Tech*. A large silver loving cup will be given to the winner of the final award. The Alumni Council will have an opportunity to contribute for the prize, and the judging will be done by the three present donors and the Alumni Council.

One of the charges against the "Stein Song" is that it is not strictly a Tech song. Technology cannot claim full parentage of the famous piece, for, although the music was written by Frederick Field Bullard, Technology, '87, the words are the work of Richard Hovey, a Dartmouth man. However, what Tech did not own by right of birth it gained by adoption and usage. Tech has most of the nine points that go with possession.

There are many Tech men who will object to the dropping of the "Stein Song." Tech is unique in many ways. It is the only undergraduate institution of its size that has no football team. The student cheer, "We are happy — Tech is hell," is probably unlike any other American college cheer. Some of Tech's unique educational advantages are unquestioned. Thus, with a reputation for being "different," there are many who will not rejoice to see Tech fall in line for the "Hail-Glorious-Alma-Mater-Thy-Loyal-Sons-etc." type of college song.

Tech has a number of other songs, any one of which might be considered for the crown which the "Stein Song" is to be forced to abdicate. Of these there is one which is favored by undergraduates for occasions not sufficiently formal for the more pretentious "Stein Song." It is "Take Me Back to Tech," written by I. W. Litchfield, '85, who was the *Globe* correspondent at Tech during his student days. But, if this song were chosen to replace the "Stein Song" there would be difficulties encountered.

One difficulty is found in that part of the dry law which caused owners of wine shops to paint out the names of forbidden beverages which adorned the walls or windows. Surely, if even the mention of banished beverages is *verboden* by the law of the nation, there are some parts of "Take Me Back to Tech" which will fall under the ban.

For instance, the chorus goes: "Take me back on a special train, to the glorious Institute, for I yearn for the inspiration of a technological toot." Now here must be treason. If a man may not read on the window of a wine shop the word "wine," surely we must not make public our shameful yearnings for a "toot," whether technological or otherwise.

And again, to continue: "I'd shun the quizzical physical prof, and chapel and all that, but oh, how I'd like to go again on a scientific bat." Heavens! "I'd like to go again on a scientific bat." What ever would Mr. Volstead say!

(While on the subject, some one had better up and change the name of Tech, before the dry officers begin to suggest taking the "toot" out of Institute.)

It appears, then, that "Take Me Back to Tech" is out of the question. There is another, "The Tech Push," words by Gelett Burgess, '87, music by F. F. Bullard, '87. Let's see. It goes, "When the wheels of life are sticking, come to us, we'll set them ticking." Well, that's all right. But what's this? "If you want a road to Jupiter, or a ten-foot shaft to hell, we've the engineers for a thousand years, and we'll do it corking well!" A ten-foot shaft—where? Mercy! We'd better try something else.

Then there's the one about "I would not be a Yale man" (for which divers reasons are given), and in continuing stanzas, "I would not be a Harvard man," nor a Brown man, nor an Amherst man. The chief reason is given at the end: "For I am just a sweet co-ed, and couldn't, don't you see?" But this seems to be too flippant.

Then again it might be possible to keep the music of the "Stein Song" and write new words, bringing the sentiment up to date. Of course, a man would have to be nimble with his tongue to get "with a cocoa-cup on the table" into the same tempo as "with a stein on the table," but it might be done by the introduction of a few grace notes.

Then, too, the last line might be made, "And a cracker in the air," which fits the time very well and is besides very appropriate, what with the famous Tech "free lunch" and all.

To consider all possibilities: The "Stein Song" would be again in favor if the dry law were modified. That may seem far away, but

the Tech alumni seem to be working on it, and when Tech alumni start working — who knows? At least, they seem to be working on it, for at the recent alumni reunion President Arthur D. Little of the alumni said: "Coleman du Pont is now a senator. The next step is the Presidency. It ought to be easy to put a Tech man in the President's chair on a program of five-cent fares to Havana."

The elimination of the "Stein Song" at Tech is not only a fact — it is a symptom. They are taking all the joy out of life. Not content with removing the stein, they are also taking away the "hops." Last year the Walker Memorial at Tech had a wooden dance floor, one of the finest in New England. It was getting so that there were three or four dances a week. During the summer the Faculty got busy, and when the students returned this fall they found the dance floor replaced by a composition stone floor. After trying this floor once or twice, it didn't take long before the hops were pretty effectually eliminated.

Then there's the matter of smoking. The students are not allowed to smoke in the Institute corridors. However, a common way for denoting great plenty at Tech is to say that the article in question is as plentiful as cigarette butts in the main lobby.

The student decorations on the walls of students' rooms in the dormitory are subject to Faculty censorship. The censorship is rather severe. Last month a student who had pasted on his wall Bible tracts with the sentiments, "Love your neighbor," and "Do a little good every day," was not molested.

Pretty soon it will get to be so that a student's only means of getting a thrill will be to drop over to a Faculty dance and watch the pros whirl around.

There is, however, just one little fact to be cited in extenuation. It is not wished to cause any embarrassing enrollment at Tech immediately, but some one ought to call up the department of biology and public health and ask if there is anything to the course in fermentation.

What with the Faculty taking care of the physical welfare of Tech students by means of a free lunch, and of their esthetic welfare through a course in the appreciation of music, it isn't much like the old days when a Tech man could take perfect care of himself and, if necessary, of any three men that blocked his path.

Nowadays they mustn't sing the "Stein Song." Its theme is treasonous. Perhaps the next thing that happens, Tech students will be forced to change their "We are happy — Tech is hell," to "We are joyful — the Institute of Technology is the very devil of a place."

Well, there were fifty co-eds at Tech last year. Maybe it's the feminine influence.

Whether Tech solves its problem in regard to the "Stein Song" or not, there is at least one song to which the average citizen can lend his voice and heart in these days of drouth.

Let the choir strike up, "There is no balm in Gilead."

TECH STUDENTS RUSH BLITHELY TO NEW
COURSE, "APPRECIATION OF MUSIC,"
AND LEARN "HOW DRY I AM"
IS NOT HIGH ART

Do Tech students appreciate music? O boy! can a camel walk? For the first time in the history of Tech — the same Tech that has bridged rivers and altered sky lines — a course in "Appreciation of Music" is part of the curriculum as an elective subject. And immediately after the subject was announced over one hundred of the embryo engineers signed up for it, along with eight or ten Faculty members who are sitting in as listeners.

Doffing their lab coats in some of the laboratories where the walls and ceilings are pierced by many explosions, the Tech boys will proceed to the musical lab, where the talking machine and mechanical piano hold sway. Leaving the horrible roar of the brick-rattler behind in the highway lab, they will repair to another building to listen to the wailing of a "canned" Stradivarius or the tinkle of a mechanical "Spring Song."

The course is being given by Penfield Roberts, an instructor in the department of English and history, and a *Globe* musical critic. Mr. Roberts has given his classes several pointers on attending a concert. They are not, he instructs, to enjoy the concert. They must do more than that — they must appreciate it critically. It is a requirement of the course to attend one concert each term without enjoying it.

On the first day of the course a questionnaire was given out to the students and professors taking the course. They were required to note the name of their favorite song or orchestral selection, and to state what instrument they could play. They were asked if they had any objection to performing on their favorite instrument, and told that it was to be hoped that if a man did not play he would at least sing.

Students who announced as their favorite, "One Keg of Beer for the Four of Us," or "How Dry I Am," will not be allowed to sing these songs, says Mr. Roberts; they must make a second choice. It is not true that admission will be charged the day the Faculty members perform, because it is not probable that they will be required to entertain. In fact, none of the students will be required to sing or play. Some will not be allowed to.

There has been much conjecture regarding favorite musical selections of the professors. The consensus of opinion seems to be that the Faculty members like famous poems or sayings set to music, such as the famous war slogan, "They Shall Not Pass," set to a little thing by Chopin. It has been denied that one instructor, who had a co-ed in

his class last term, cited as his favorite song, Kipling's "And I Learned about Women from Her."

"Most people do not realize," says Mr. Roberts, "that there is a very close connection between music and mathematics." Perhaps this is sugar-coating the idea of attending such a course so that it will appeal to the engineering mind. At any rate, it is so much more satisfying to think of music as a collection of sine waves of varying lengths and frequencies which create a sensation on the diaphragm of the ear, rather than to think of it as a collection of more or less pleasing sounds. If it is possible to get hold of the equation of the sine curve, so much the better.

The Tech boys are to be taught the rudiments of rhythm, melody and harmony. It is not to be barroom melody, nor barber-shop harmony. Outside lecturers are to come to the classes to give lectures when the strain becomes more than one man can stand, and the Steinert Piano Company has helped along the dirty work by donating a talking-machine and a piano. Tech students themselves are to furnish the records, although no guaranty is made that all of the records will be played.

Tech students themselves are not very long on the scientific end of music. They run more to "Pickle My Bones in Alcohol," or "I'm a Rambling Wreck from Boston Tech, and a (something-or-other) of an Engineer." But there must be a few highbrows, for some of the students who didn't care for the regular music of the glee club have started a choral society to sing the society stuff.

The Tech Faculty is treating the students fine. Between the bread line, which was established last week, and this music course, they ought to be refreshed both spiritually and physically. But some of the photographs of the bread line, which were published last week, indicate that there are dark days ahead. In the photos the students were pictured studying while they were drinking their cocoa — they couldn't drop their books even that long. They must combine everything with study.

The effect of this is horrible to contemplate, if they start combining their musical refreshment with study. One can imagine a student rising in a structural class while answering a question and reciting to the tune of the "Toreador Song": "This here bridge is in-de-terminate; tra la la la, tra la la la. Add just one more joint and make it eight; tra la la la."

The professor's accusing answer seems to echo: "What you don't know of this would fill a book — Toreador, Toreador. One more flunk and then you get the hook — Toreador, Toreador."

Which makes a most appropriate ending.

"Toreador, Toreador."

TECH STUDENTS SWARM TO A LECTURE IN WHICH CAT IS USED

Only once in a blue moon is the "Standing Room Only" sign hung up in Eastman Hall, the big Tech lecture room, for an ordinary routine lecture.

Yesterday was the day for the current cycle of the indigo planet, when more than six hundred students, recruited from all four classes, came around to see Prof. William S. Franklin, Sc.D., perform the regular Wednesday physics lecture for sophomores.

The magnet that drew this throng, where only a mere handful are required to attend, was partly the fame of Professor Franklin's ingenious methods of teaching, but even more attractive than the renown of the scientist was the renown of a common or garden variety of cat.

The cat was just an ordinary tabby, of no particular ancestry or breeding, but its presence attracted hundreds of Tech students who, it has been claimed, wouldn't go a step out of their several paths to see even the great Marshal Foch.

The intensely dry and highly technical subjects of "torque" and "moment of inertia" were being taken up by Dr. Franklin, and it had been heralded for weeks that there would be some interesting developments when Professor Franklin got steam up.

Last week the professor announced that the lecture would be postponed a week, for the amazing reason that he couldn't get a cat, and, as the fame of this announcement spread, the doors were swamped yesterday at the beginning of the lecture.

Lecture-room attendants and janitors who have been working at these physics lectures for a score of years or more were astounded. They swear that the only time those doors have been swamped before is when they have been opened outward, not inward.

The incoming students were welcomed by a blackboard sign stating, "The cat for this lecture has been supplied by *The Tech*," *The Tech* being the undergraduate newspaper. Shortly afterward the rumble of wheels was heard, and into the hall came a strange procession, headed by Dr. Franklin. Following him were several students, pushing a wheeled vehicle of unique shape.

On the vehicle was a box that resembled a tiny coffin, but the sounds which came from the box told the world that whatever was inside was a long way from being dead.

With great solemnity Dr. Franklin removed the cover. Followed the removal of additional swathings, and then, amid yowled protest from the box, the lecturer produced the cat, as if he were a magician with the magic silk hat.

In spite of the big red ribbon which adorned the neck of Isaac

Newton, as the feline was immediately christened by the students, and in spite of the truly noble proportions of back and limbs — even in spite of the profoundly regal yowl — it was evident to even the most unlettered of the students that the animal was a common alley cat.

No evidence was introduced to show that Isaac, honored above his mates, was not the cat which nightly yowled on the professorial back fence, to be the target for the professorial shoe.

There was a storm of applause as Isaac was brought into the light, but Dr. Franklin's upraised hand quelled the outburst. He did not know that tabby had been named Isaac Newton, but we will assume that he did. "We must have quiet," said Dr. Franklin, "because Isaac does not like to perform this experiment in an atmosphere of excitement."

After soothing Isaac by repeated stroking, Dr. Franklin mounted a chair, still holding the cat in his arms. He explained that it was his aim to hold Isaac upside down and then drop him to the table, a distance of two or three feet. Isaac's method of twisting in the air so as to land on his feet would, said Dr. Franklin, illustrate one phase of the torque problem.

At first Isaac resisted the efforts of the professor to turn him upside down. Some of the students suggested holding Isaac by the legs, but Dr. Franklin had too much respect for Isaac's flying claws for that.

Finally Isaac was got into position and dropped. To the great glee of the students he performed his act, and, as the lecturer explained, twisted in the air by using his tail as a base and turning one part of his body one way and the other part the opposite way.

Dr. Franklin pounced on Isaac before he could get away, and Isaac went through his performance two or three times more, keeping the students convulsed by his good neighborly swipes at Professor Franklin's eye.

Then Isaac was restored to his box and went riding out in state, red ribbon and all, to a royal meal at the expense of Dr. Franklin. Isaac's contented purrs as he licked the plate clean were intended to convey that he rather enjoyed the little performance and that he was well satisfied with the scientific life.

Later in the lecture Professor Franklin used a stuffed piece of garden hose, very much resembling a snake, to go through Isaac's twists more slowly. Then, to illustrate moment of inertia, he mounted a device resembling a piano stool and made frantic efforts to swing himself around, so as to demonstrate that it couldn't be done.

Then, with a couple of students furnishing the motive power, he regulated his rotatory speed by changing the position of his arms, the whole thing making a very lucid explanation of a very abstruse theoretical point.

Dr. Franklin is famous among the students at Tech for his original methods, and there is rarely any cutting of his classes. He has written

many books on widely varied subjects, ranging from pure literature through mathematics, physics and electrical engineering.

"Well," remarked some of the students, "he couldn't have had a better assistant. It isn't every physicist that can work with Isaac Newton."

FIVE "PROFS" JOIN SHIFTERS AT TECH

Tech students, alumni and Faculty members to the number of seven hundred, gathered in Eastman Hall on the afternoon of January 30, to see Dean Henry P. Talbot initiate five professors into "The Shifters," the new secret society of college men.

The neophytes were Prof. Edward F. Miller, member of the administrative committee and chairman of the Faculty; Prof. Robert E. Rogers of the Department of English; Harrison W. Hayward, professor of materials of engineering; Lawrence S. Smith, professor of theoretical and applied mechanics, and Assistant Registrar F. L. Clapp.

Dean Talbot, who is head of the administrative committee, opened the meeting and spoke for a few moments about "The Shifters." "It is our purpose," said Dr. Talbot, indicating the throng of students, "to leaven this lump with the spirit of good fellowship and to abolish the spirit of 'I don't know you.'"

Whitworth Ferguson, a graduate of Iowa State University, who introduced "The Shifters" at Tech, told how in two weeks it has swept through Tech and spread to every college around Boston, including all the girls' colleges. At Harvard, he said, it is not known whether there are any chapters except in the Dental School.

Donald F. Carpenter, '22, president of the senior class and chairman of the Institute Committee, indorsed "The Shifters" society. Then the initiation of the Faculty members was begun.

It had previously been determined that only members of the society were in the hall, by guarding the doors and requiring each man that entered to give the secret "high sign." Professors Smith, Rogers, Miller, Clapp and Hayward, who had been sitting in reserved seats in the front row during the early part of the exercises, were asked to rise, and stood facing the audience.

Prof. W. H. Timbie, head of the coöperative course in electrical engineering, had been appointed master of ceremonies. He requested each of the initiates to raise his right hand and repeat the oath. It started, "I, repeat your name —," and each of the professors solemnly droned, "I, repeat your name —." They were admonished that each was supposed to repeat his name after the "I."

When each professor had taken the oath he was decorated with the unostentatious symbol of membership, a gilt paper clip worn in

the right lapel of the coat. As each was invested with the decoration there was wild applause from the hundreds of students. Prof. Ralph G. Hudson of the Department of Electrical Engineering then demonstrated to the new members, the grip, password and high sign.

A few days ago Dr. Arthur D. Little, president of the alumni body, was initiated at a special session.

THE PURITAN MALE

An Editorial Anent the Tech Undergraduate From the Girls'
Number of the *Voo Doo*

TECHNOLOGY'S *enfants terribles*, the Class of 1925, may regard this issue as they choose: politically and economically, it is of extreme interest. It marks an advance in the annals of college journalism which, not so many years ago, would have been impossible.

The idea of a Girls' Number would never have occurred to our fathers. In those days, it would not have been polite for girls to have numbers. The girls themselves would have been horrified at the suggestion. If some young dude of a college editor (for they were, in those days) had ventured the suggestion to any fair damsel, the f. d. would have sprung from him with mingled horror and disgust, and exclaimed, with the true George Eliot mechanism, "Leave me, sir; and henceforth, pray avoid me." Quite fitting, too, for the suggestion would have been wildly improper. Girls were supposed to possess no accomplishments in those days save blushing and fainting. Anything else was destructive of feminine modesty, and an insidious wallop at the Sanctity of the Home.

All of which is different now. Girls have taken to themselves all manner of accomplishments which twenty-five years ago would have caused them to be driven, outright, from their fathers' homes. Are they any worse for it? Phosphorus thinks assuredly they are not. For compensation, it is true, nature has taken from some of these girls their one-time ability to blush, causing thereby the necessity for rather careful editorial scrutiny of the material for this issue, but no other harm.

All in all, it is a healthy age, this flapper one. Girls can go where they please, do what they please, be what they please. And talk as they please, too. Once upon a time, it was impossible to be a girl without being a hypocrite, too. In that nasty age, when half the civilized human race could not be respectable if it smoked, voted, petted or wore flopping galoshes, there was a stubborn refusal to recognize that girls were made of the same protoplasm as boys. Nor was that age exclusively Victorian. Only within the last few years has the girl been able

to cast off completely the cloak of hypocrisy that she has been so snugly wrapped in.

But now she has done it, and stands free of all encumbrance. She stands for an age of unity. The double-standard and the two-piece bathing suit are equally hateful things, and the flapper has superseded both together. She is frankly as her brothers.

And now, incomprehensibly enough, the question is rising, "How long will her brother remain as she?" The astounding thing is that the emergence of the flapper has been closely paralleled by another process, the steady retreat of the flapper's male counterpart into a newly constructed abode of Puritanism professed. The retreat started, as so many do, with an attempted flanking movement. The male, at first, resented the advance of the flapper, and told her so — told her what was right for her to do, and what was wrong. He told her so often that soon the monotonous noise of the words he was saying hypnotized him, and he came to find himself believing what he said, and not only believing it, but applying it to his own behavior.

At present, this catalepsy is manifesting itself in peculiar ways. You will find them as close as you care to look for them. While the flapper is busy denouncing Phosphorus for being "too quiet" in his jests, the Puritan male writes to the *Tech* bitter plaint that the last Shred of Decency has disappeared under the paw of Phosphorus, and that he gets his laughs not by being funny, but by being vulgar and salacious. This is pretty hard on the Masculine Modesty that must be preserved, lest the race perish. Phosphorus has come to shrink from the "wise crack" as much as most of his sex, and he is overcome with chagrin, sometimes, when another male, more progressed a Puritan, accuses him of one. Life is not easy, these changing days.

But, being a philosopher, too, he often thinks on these strange matters, and wonders Who Started It All, and Whither We Are Drifting. It bothers him, for if we continue to drift as fast, ten years will find the positions of the sexes, in everything from morals to economics (and that's a long road!) reversed completely. The flapper of today will be the tired business woman of tomorrow, with the Technology student and his male friends the possessors of the hand that rocks the cradle. Higher education will begin going out of fashion for boys. Technology itself will become an exclusively feminine institution, and. . . .

Stop! *There's* a fascinating speculation. What kind of a *Voo Doo* will they put out? Will they, if we wait long enough for another swing of the pendulum, ever consider sopping us with a special "Boys' Number?" Will they ever sit at their typewriters, as one of the last male editors does on the night that these words are written, and write a defense of the gentler sex, to help us along in our aspirations to become as they are? No doubt they will. The dynamics of history leave us not much in doubt that although the male is due to go out of power for a period of years, he is due to come back — not permanently, of course, but still, due. His present overthrow will not be forever. Some day it will strike the flappers of the future that they are going too far. One

of them will write to the editress-in-chief of the *Tech*, protesting that the latest issue of *Voo Doo* positively oversteps the last bound of decency. "I'm not a prude," she will say, "but I was ashamed to send that last number to any of my boy friends." That will be the beginning of another end.

That softens the blow a little. History is a great solace. We can take our medicine, now, and say to the contributors who made this issue possible, "Hail, flapper! those about to die salute you."

ERIC F. HODGINS, '22.

TECHNOLOGY FORUM IS NOW SPEAKER'S CLUB

Will supply men to advertise organization activities

THE Technology Forum which began its career at the close of the last term has been incorporated into a larger organization known as the Technology Speaker's Club. The committee appointed at the first meeting has drawn up a temporary constitution, embodying many ideas from other colleges which fit the needs of Technology.

The first object of the club is to afford a means by which a man can increase his ability to present his ideas in a forceful and interesting manner before an audience, a training in public speaking.

The second is accomplished through the medium of an open forum which any student may attend. At this forum a speaker of prominence will talk on some current question, after which the discussion of the subject will be thrown open to the audience. This discussion may be to challenge the arguments of the speaker or to present the ideas of the individual.

A forum for the discussion of undergraduate problems, such as a raising of the student tax, will be held whenever a question of this sort arises.

A third service will be given to Technology organizations. There will be four-minute speakers who will advertise the activities of any society or publication. The speeches will be delivered to the students previous to lectures, or at special meetings.

The requirements for membership in the Speaker's Club are that the candidate shall have performed a certain amount of speaking either in the forum or in public. During the remainder of this term, candidates will be admitted in a limited number as charter members without previous experience.

At the second meeting of the club which will be held on or about April 6, all men, including those who were present at last term's meeting, may become members by filling out the membership cards which will be available at that time.

IN THE PUBLIC EYE

HENRY D. JOUETT, '00, known to railroad America best as "the man who built the Grand Central," and now the man who will be the chief engineer of the Cleveland Union terminals on Public Square, smilingly submitted to interview at the new offices in the N. E. A. Building, West Third Street and Lakeside Avenue N. W., of the Cleveland Union Terminals Company staff of engineers.

When the interviewer's purpose of calling was told him, Mr. Jouett said: "Well, we are here and at work on the preliminaries for the Public Square Union terminals. That's all the 'news' there is, I think."

"Well, what about yourself?" he was asked.

Mr. Jouett's reticence about himself was directness itself. "My history? In the railroad work since I left school. I went to the New York Central twenty years ago when I finished at Massachusetts Tech and have been there ever since."

Mr. Jouett is a tall, slender, quiet man of early middle age — he almost strikes you as "youthful" for the engineering reputation he has made. He dresses faultlessly, has smooth, light hair over a high forehead, a tranquil and unwrinkled if businesslike face, and keen eyes surmounted by light rim shell glasses.

When he was asked what the comparison was between the Grand Central terminal construction in New York and the Public Square project, he said:

"Yes, they are comparable. As far as I know the Cleveland construction will be the only other terminal with tracks below the ground level and buildings above used for commercial purposes.

"The construction proposition is of the same sort and encounters about the same physical layout as the Grand Central."

Mr. Jouett is forty-four, and was born in Somerville, Mass., March 30, 1878. He was graduated from Massachusetts Institute of Technology in 1900, and then joined the New York Central engineering forces as a rodman in the division engineer's office at Albany.

A month later he was promoted to inspector of bridge erection, and a year later to assistant supervisor of track. The following year, he rose to assistant in the division engineer's office. For the better part of a year, he was with a building contractor's firm, but in 1903 he returned to the New York Central in connection with the electrification of the New York Central lines entering Manhattan, and since that time worked up through the posts of transitman, assistant construction engineer, resident engineer, designing engineer on the electric zone improvements (later on the New York "west side" improvements) and last terminal engineer, the position he holds now.—*Cleveland Plain-Dealer*.

GEORGE ELLERY HALE, '90, who is going to Brussels as American representative at the International Research Council, is a celebrated astronomer who for some years has been in charge of the solar observatory of the Carnegie Institution at Mount Wilson, near Pasadena, Cal. Professor Hale got his preliminary training in physics and astronomy at the Massachusetts Institute of Technology and at the Harvard Astronomical Observatory. Then he went to the University of Berlin. He got his first chance to work to the extent of his capacity when he joined the staff of the University of Chicago, as professor of astro-physics, but more especially when he became a full professor and was in charge of the famous Yerkes Observatory. He is one of the world's greatest investigators in solar and stellar spectroscopy, and few men in the United States have had so many high honors formally conferred upon them by European societies.

ERIC KEBBON, '12, assistant architect of the new Institute buildings under Welles Bosworth, '89, announces that he has now established a new architectural firm at 522 Fifth Avenue, New York.

Except for the period during the war, Kebbon has been associated with Mr. Bosworth, the famous architect of the Institute, since his graduation in 1912. Kebbon had established a record for himself while yet an undergraduate. He was president of the senior class and also chairman of the Institute Committee. His merits in architectural work were recognized by Mr. Bosworth, who was then beginning on his work on the new Institute. Upon graduation Kebbon immediately stepped in as assistant architect under him.

When the war was declared he offered his services and was intrusted with work of vital importance. His experience as an Institute architect enabled him to render material aid in the various building projects which the War Department had undertaken. He went to Washington in the summer of 1917, where he was appointed assistant construction manager of the cantonment division with the rank of captain in Engineers Corps and later major in the Quartermasters Corps.

As construction manager he directed all the general office work over the construction of eight national army cantonments, and later as constructing quartermaster he had charge of several other projects. The construction of Camp Meigs was his first assignment. The order called for the erection of the whole camp, including barracks, mess halls and storehouses, besides a complete water, sewer and electric-light system. The order came out on October 2, 1917, and on November 22 the camp was ready for occupation. On the same day Kebbon received orders to proceed to Virginia to construct a large training camp to accommodate eighteen thousand engineer troops in the woods around Belvoir. The site had to be cleared out of the forest, and a railroad to displace the almost impassable cart roads had to be built before any buildings could be erected. Hundreds of transport trucks and over six thousand men were employed for the whole task.

DWIGHT P. ROBINSON, '92, VI, organizer and president of Dwight P. Robinson & Company, Inc., engineers and constructors, has for more than thirty years been engaged in bringing large engineering and construction enterprises to completion with speed and economy.

Mr. Robinson was born in Boston, May 1, 1869. In 1890 he was graduated from Harvard and two years later from the Massachusetts Institute of Technology, where he obtained his electrical engineering education. After graduation he assisted in the mechanical engineering laboratory at the latter institution and in 1893 joined the organization of Stone & Webster. Within a few months he was placed in charge of the Chicago office, and in the following year constructed a power plant at Nashville, Tenn., for the Union Light and Power Company. From 1895 until 1903 he was engaged in operating different light and power properties under Stone & Webster management. The first two years he was general manager of the Cumberland Light and Power Company at Nashville, Tenn., and then for two years he was at Baltimore as general manager of the Edison Electric Illuminating Company. In 1899 he went to the Pacific Coast, where for four years he was with the Seattle Electric Company in charge of the light and power business and the development of the hydro-electric and steam-power supply of Seattle and adjacent cities.

In 1903 Mr. Robinson returned to Boston in charge of all engineering, and when the Stone & Webster Engineering Corporation was formed he was made president in charge of both engineering and construction activities. In 1912 he was admitted to partnership. During the period from 1912 to 1918 he had charge of notable hydro-electric developments at White River, Cal.; White Salmon, Wash.; Big Creek, Cal.; Falls Village, Conn.; Dundee Falls, Me.; Columbus, Ga.; and the reconstruction of the Hauser Lake dam in Montana, and also had charge of building steam stations at Seattle, Minneapolis, Boston (four), Buffalo, Bridgeport, Lowell, Houghton, Mich., Savannah, Jacksonville, Tampa, Pensacola, Columbus, Dallas, Fort Worth, El Paso, Houston, Port Arthur, Pittsburgh, Seward, Pa., Pittsfield, New Bedford and Bridgewater.

In 1918 Mr. Robinson gathered about him a staff of old associates and organized the firm of Dwight P. Robinson & Company, Inc., to carry on an engineering and construction business specializing in the design and construction of power stations and industrial plants. Among the first contracts of this company was one for the design and construction of the large Colfax power station for the Duquesne Light Company where generating units of sixty thousand kilowatts each were installed. The ultimate plant, which is designed to contain six such units, will be among the largest steam plants in the country. This plant was described in detail in the *Electrical World* for April 12, 1921.

The company rapidly expanded, many contracts of various kinds were obtained, and the organization grew to large proportions. In 1920 Dwight P. Robinson & Company, Inc., absorbed Westinghouse, Church, Kerr & Company, Inc., by consolidation, resulting in one of the largest organizations of its kind in the world.

MISCELLANEOUS CLIPPINGS

A HINT FOR BOSTON

NECESSITY, it seems, is the mother of coöperation as well as of invention. Because maintenance charges have risen so much faster than resources, three Worcester colleges are considering the possibility of an agreement among themselves whereby professors and students will be exchanged, duplication of courses prevented and overhead expenses generally reduced. It is in no sense a merger that is being proposed jointly by Clark University, Clark College and Worcester Polytechnic Institute, so alumni need not be unduly alarmed. It is simply an attempt to eliminate some of the educational waste which prevails whenever and wherever several institutions of higher learning though living in close proximity one to another, go on their independent and separate ways.

What form this intercollegiate coöperation will take is not yet indicated. The whole matter is still in an uncertain state, and much work of an investigating nature remains to be done. But it is obvious that some of the courses now taught in all three institutions really need to be taught in only one, and could be taught in one with an increased efficiency. Advanced science might very well be given into the keeping of the Polytechnic Institute, which in turn would be allowed to send some of its students to Clark for cultural and humanistic training. Carrying the idea still further, certain professors might teach in all three colleges.

The program of closer relationship between educational institutions is not new. It involves nothing that savors of the experimental. In Pittsburgh, for instance, the Carnegie Institute of Technology and the University of Pittsburgh have worked out a plan that is proving mutually advantageous and under which duplication of effort is reduced to a minimum. Each college gladly abandoned courses, even whole departments, in favor of the other, and instruction is now given where the facilities are the more nearly adequate. This measure, though primarily one of economy, serves also the highly important purpose of defining more clearly the work of the two city institutions. Something along the same line was attempted here a few years ago when Harvard and the Institute of Technology pooled their resources for the teaching of engineering. That the agreement was later abrogated was due not to any defect in the plan but to the fact that the Supreme Court decided that Harvard could not legally use its McKay Fund in combination with any other college.

As the seat of numerous colleges and universities which frequently announce themselves as seriously in need of funds, Boston will watch with interest the progress of Worcester's coöperative endeavor. It may very well be that the time will come when some such plan will

offer practically the only solution of the financial difficulties now embarrassing so many institutions. Even now signs are not wanting that there is a limit to the amount of money which can be raised by drives and campaigns. — *Boston Evening Transcript*.

JUNKETS OF UNDERGRADUATES

THE inconspicuous announcement in Boston newspapers a day or two ago that arrangements have been made by which members of the classes at Massachusetts Institute of Technology may visit and inspect a number of the important industrial and manufacturing institutions in the East can hardly fail to arrest attention. This should not be regarded as a new departure, and perhaps the undertaking is not unique. But the inclination is to believe that it is somewhat of an innovation. Junkets provided for undergraduates are not unheard of. Indeed they have become quite common in college circles in all parts of the United States. But these excursions are usually arranged, not for study and research, but for the pleasure of the participants or for the furtherance of some recognized established activity of college life, such as football or baseball games or a scheduled tour of a glee club.

The matter of collegiate sports has been so thoroughly discussed recently that nothing seems to remain but the delayed rendering of the verdict of the public. The effort seems to be to divest these sports of the alleged objectionable influences of "professionalism," which may mean much or little according to preconceived notions of what professionalism in sports really is or is not. But there can hardly be a serious doubt that some of the other junketing activities of the colleges should be condemned without further trial. There is much to be said in disapproval of cross-country tours made to fill schedules arranged for the more popular college sports, and much more may be said in disapproval of such departures from the established activities of the schools, no matter how the expense of such trips is borne. The belief of the layman, and the alumni, when some of the glamour of the Alma Mater has faded, is that instead of these activities being advantageous to the participants, they are in fact detrimental and distracting. They are conceived, unmistakably, in the hope that they may bring, in the form of publicity, some prestige to the college which could not otherwise be gained.

But such an indictment can hardly be brought against this plan of "Tech" to provide for its students an opportunity to observe, at first hand, the important modern processes which have been developed to a point approaching mechanical perfection in the greater manufacturing establishments on their itinerary. One cannot imagine that such a junket will prove uninteresting or even prosy to the youthful participants. It easily promises to provide as much fun as a ball game or a concert, and in addition there is bound to be a benefit to the students themselves which no aimless excursion can promise. And no worthy college "tradition" will suffer by the innovation. — *Christian Science Monitor*.

NEWS OF ALUMNI ASSOCIATIONS

BUFFALO — TECHNOLOGY CLUB OF BUFFALO.— We held a very successful dinner and smoker Wednesday evening, March 15, at the Technology House which is maintained here in Buffalo for the benefit of the boys taking the course in Chemical Engineering Practice. About fifty members, including several from Niagara Falls, were present. Mr. Everett Morss, '85, Treasurer of the Corporation, the speaker of the evening, gave us a very interesting talk on the present status of the Institute. Mr. George Anderson of the Niagara Falls Power Company showed some excellent slides and moving pictures depicting the hydro-electric power development at Niagara Falls. Norman Duffett and Ned Pollard, Niagara Falls' live wires, endeavored to enlist recruits for a bowling party to be held at the Falls, March 24.

Frank G. Lane, II, '02, was elected president to succeed Mr. Albert E. Sampson, V, '15.— William H. Watkins, V, '95, formerly General Manager, Buffalo Works, National Aniline and Chemical Company, is in France with his family, investigating some phases of the dye industry.— R. C. Lindsay, X, '07, Manager of Industrial Sales for Pratt and Lambert Company of this city, has recently been made sales manager.— Will G. Houck, I, '93, President of Buffalo Structural Steel Company, has been elected a Director of the Chamber of Commerce of Buffalo.— F. C. Atwood, XIV, '14, is in the city temporarily doing some special work for the Jacob Dold Packing Company.— A. P. Farnsworth, XV, '17, who is connected with the Miller, Franklin and Bassett Company, New York, has been doing some reorganization work along production lines at the plant of the Niagara Refrigerator Company.— *Ross D. Sampson, Secretary, Lumen Bearing Co., Buffalo, N. Y.*

CHICAGO — TECHNOLOGY CLUB OF CHICAGO.— The Musical Clubs Concert at the Blackstone Hotel on Friday evening, December 30, was a huge success. It was attended by nearly five hundred local Tech men and their guests who voted the concert the most successful that had ever been given by the Technology Musical Clubs in Chicago. The concert numbers were excellent and were very well received. The concert was followed by a reception and dance which gave an opportunity for a most enjoyable social gathering. The music for the dancing was supplied by the Technology Jazz Band which was organized among the personnel of the Musical Clubs and which their manager guaranteed most highly.

Some of our members, particularly K. T. King, '15, were a little doubtful of the quality of music that would be furnished by this student orchestra and when the clubs reached Chicago that morning I spoke to their manager, R. C. Rundlett, '22, suggesting that he do his best to have the orchestra play better than they had ever done before.

He offered to bet me a box of cigars that after the third dance number Mr. King would agree that the orchestra was the best he had ever heard. I took him up. About dinner time I learned indirectly that Mr. Rundlett had spent the afternoon admonishing the members of the orchestra and urging them to do their utmost to win that box of cigars "not for the sake of the box of cigars, but because of the principle." That evening after the first number, Mr. King told me that the music was more than satisfactory and I promptly presented Mr. Rundlett with a box of Hotel Blackstone cigars which we trust the boys enjoyed properly after the concert. As the orchestra played so well here we are a little at a loss to understand why they did not play at the Musical Clubs Concert in Boston.

The final balance sheet of the concert shows total receipts of \$1,485 and total expenses of \$1,440.22, leaving net profits of \$44.78, half of which goes to the Musical Clubs under our contract with them. We received one hundred and fifty orders for four hundred and ninety-five tickets, the price of the tickets being \$3 per person.

The promotional work on the concert was started early in September when sixty-six subscriptions of \$5 and \$10 each were received to guarantee a fund to underwrite the concert. A list of these subscribers was published in the last REVIEW. These subscriptions were payable November 1, in order to give us a working fund to handle the preliminary expenses. The payment of the subscriptions was rather slow and only fifty-one subscriptions were received, the total being \$505. It was decided by the Executive Committee not only to return the subscriptions intact because of the small profit on the concert, but to give the guarantors a dividend of one per cent which is at the rate of six per cent per annum, which in turn is the current bank rate in Chicago for time loans. It was felt that this small dividend did not represent proper return for the risk involved but that as the concert was not run for profit a larger dividend might be open to criticism. This dividend establishes a new record in the annals of the Technology Club in Chicago. Usually guarantors have received only part, if any, of their money back; this time they not only receive it back one hundred per cent but got a small dividend in addition.

The large number of guarantors each subscribing a certain amount not only provided a working fund and insured the concert against loss but also provided a large body of men who were financially interested in the concert and who worked very hard to put it over.

The largest number of tickets was purchased by the Class of '87, while the largest number of men attending was from the Class of '21. K. T. King, '15, bought the largest number of tickets, taking twenty for himself and his friends. Incidentally, it may be remarked that his party consumed a larger proportion of the punch than any one else's.

Four promotion committees were organized to see every Tech man in Chicago personally. C. B. Page, '99, handled the promotional work for the classes prior to 1900; H. S. Pardee, '09, handled it for the classes between 1900 and 1910; N. E. Baxter, '14, handled it for the

graduated classes since 1910, while K. T. King, '15, interviewed the fond parents of every Chicago boy who is now at Tech. Incidentally, the Chicago students who were home for the holidays turned out to the concert *en masse*.

The arrangements for the dance, including the refreshments, arrangements for programs, etc., were handed by the arrangements committee of which H. C. Blake, '06, was chairman. Mr. Blake is in the construction department of Morris & Company at the Stock Yards and liberally used their resources in preparing the refreshments which were greatly appreciated by all present. Mr. Blake also arranged a trip through the stock yards that day with luncheon at Morris & Company for the boys on the Musical Clubs.

Lonsdale Green, '87, was chairman on the committee on entertainment of musical clubs and took the boys in charge when they reached Chicago that morning and kept them under his wing until they went to bed at the Y. M. C. A. Hotel about two o'clock in the morning after the concert. From his stories it would seem as if he enjoyed himself even more than the undergraduates. The newspaper publicity was handled by R. W. Weeks, '13, who now has a close acquaintance with every society editor in Chicago. He had the best success with the *Chicago Tribune* which printed several good writeups both before and after the concert.

The reception committee was headed by Solomon Sturges, '87, whose genial smile made every one feel at home and who did much to add the final touch to the evening's enjoyment.

There were a few humorous incidents in connection with the concert which are too good to keep to ourselves. About 7.30, Bob Flood, '96, our vice-president, was installed to collect tickets at the door as people entered. Bob is so genial and so fond of greeting people and telling them how well they look and how well they were going to enjoy the concert that he completely forgot to take tickets and soon had to be superceded by a recent graduate G. A. Kain, Jr., '21, who knew very few people and who was absolutely heartless in the collection of tickets. That change was financially successful because Mr. Kain collected nearly one hundred dollars while acting as doorman. It was also socially successful because it left the genial Bob free to devote all his time greeting people, for which he is eminently fitted.

H. S. Pardee, '09, was so busy on his company's business that he could not really get his mind centered on promoting the concert. One evening just before Christmas he joined a group of eight or ten men who were getting out a big mailing list at the secretary's office, his work being that evening to fold letters, which were to be mailed in window envelopes. Although warned to fold them properly he was so wrapped up in deep thoughts of electrical currents that several of his letters were returned by the post office the next day because they couldn't see the addresses. A few days later he sent a check by Western Union messenger to the secretary covering his subscription to the guarantee fund and two tickets for the concert. The tickets were

returned to him by the same messenger but he evidently never opened the envelope because when he reached the Blackstone he had to buy two more. It was unanimously voted that for his own good he be penalized the price of those two tickets.

We are all hoping that the Musical Clubs can come out here again in the course of two or three years. Next Christmas would be a little too soon but in order that we do not completely loose touch with undergraduate activities we are wondering if it would not be possible for the basket ball team, or the hockey team to make a trip through the middle west next Christmas. This year Yale came out and played at North-western and got licked; Colgate came out and played Chicago University and were licked; we would like to see Tech come out and do the licking.

As mentioned above, the subscriptions to the guarantee fund for the Musical Clubs Concert, which was held on December 30, have all been returned; in fact they are more than returned as each guarantor received a one per cent dividend in addition. That dividend has created a great deal of favorable comment among our members and has established a new record in the finances of the Technology Club of Chicago. A great many guarantors have acknowledged their checks with very pleasing letters, some of which are quoted below.

T. H. Perkins, '86, states: "I was very pleasantly surprised to receive your note of January 25 enclosing a refund check for \$10.10. I was willing to lose this money for the good of the cause, but inasmuch as it has come back I am more pleased to use it than to lose it." George Bayard Jones, '05, writes: "This remittance marks a new epoch in M. I. T. finance and speaks very well for the efficient management of the concert. I wish to congratulate the officers on the very successful outcome of the entertainment."

G. P. Palmer, '04, writes: "I thank you for the donation." J. L. Shortall, '87, writes: "Six per cent is a splendid return. We should be proud of the whole Technology Club Administration. When I kissed my ten dollar bill goodbye I never expected to see it again. Now it comes back with interest. The concert was a great success."

William B. Allbright, '78, writes: "I congratulate you on the success of the concert. So far as I am concerned I would rather have seen the Musical Clubs get more even if I did not get return on my guarantee. I simply want you to know that when I paid my subscription to the guarantee fund I never expected to see any of it back."

N. E. Baxter, '14, didn't dare to overwork his stenographer and merely wrote: "Please accept my thanks for the refund and dividend. I am glad the concert proved the success that it did."

C. E. Warren, '06, endorsed his check over to the Technology Club and returned it. That shows the splendid spirit of the local Tech men.

S. M. Felton, '73, writes: "I want to congratulate the committee on the success of the concert both financially and socially." F. K. Copeland, '76, writes: "I wish to congratulate the president, vice-president and particularly the secretary for pulling off a very successful

event. I knocked it hard at first and continued to knock it, and have nothing to offer but an expression of appreciation at this time that my judgment was so faulty. It is very unusual to get a rebate in a case of this kind." Mr. Copeland is surely a wonderfully good sport.

After the concert we expected quite a decrease in attendance at our weekly luncheons but except for the Tuesday after New Year's, when only twelve men were present, the attendance has held up remarkably well, running from eighteen to twenty-five men each week, although we have made no especial effort to get them out.

Last August or September I wrote suggesting that it would be a splendid thing if some representative of the Institute could make a trip through the middle west every six weeks or two months, visiting the various local alumni clubs. In November Prof. E. B. Wilson spoke at one of our regular weekly luncheons and his visit was much appreciated. I presume that other professors are in Chicago on business from time to time and I am wondering why it is that we do not get in touch with them more often. Something of this sort would do a great deal to keep the alumni interested in the Institute and I am hoping that some way can be found of supplying this personal touch.

At the luncheon of the Club, January 31, we were advised of the death of Samuel L. Hadley, '90.

The following resolution presented by H. M. Montgomery and seconded by H. W. Kern, was unanimously adopted: *Resolved*: That the Technology Club of Chicago is grieved to learn of the recent death of one of its old members, Samuel L. Hadley, '90, and wishes to express to his family the sorrow and sympathy of the Technology men in Chicago. Thereupon a copy of the resolution was sent Mrs. Hadley, 801 Hinman Avenue, Evanston, Ill.

At the Technology luncheon February 28, the Editor's notice was read to the twenty-two men present from whom the following choice bits of scandal and gossip regarding other Tech men were secured.

Copeland, '76, is so busy making up his income tax return for last year that he was unable to have any luncheon at all this noon; on the other hand, Millar, '02, got so worn out with the intricacies of his return and so disgusted because his exemptions were so small that he had to come to the Tech luncheon for relaxation, while Andrews, '94, says that business was so bad last year that he does not have to make out any income tax return at all this year.

Kern, '90, who admits that he barely keeps out of jail himself, states that Weeks, '13, and Wooley, '15, have been very active in a play recently given at St. Luke's Church in Evanston during which they flirted outrageously with the Apple Sisters, C. D. and Cora. Somebody also made the remark that George Jones, '05, is the "chief skater" of Technology. Some one else asked if they did not mean "cheap skate" of the Club but was quickly silenced by Jones.

There were several signs that business is picking up. J. O. Merrill '19, states that he ate lunch twice last week; Pratt, '12, has bought a new derby; Bradley Williams recently got together the price of a solitaire

and became engaged to Velma Staley of Evanston; Brown, '05, was able to put a dollar in the contribution box last Sunday and Page, '99, swears that it was not necessary for him to take anything out; Baker, '03, bought a new overcoat last month because he could not resist the bargain sales.

Keith, '00, spent the last two months in Mississippi bossing a gang of niggers. Montgomery, '79, says he is now keeping very quiet. Frank, '07, is taking easy lessons in Einstein; after his first lesson he slept ten hours.

Irwin, '18, calls attention to the striking improvement in the Peoples Gas Co. since he joined their staff. They have not only paid dividends but have actually reduced their rates. Irwin modestly says that part of the glory belongs to Sammy Insull. Pollock, '21, is reported as very attentive to a bobbed haired blonde, while McCausland, '18, is reported as being much attracted by a barber shop in the Railway Exchange Building. Jackson, '19, passed through Chicago last Sunday afternoon and telephoned Irwin, '18, and Bushee, '18, about three p.m. It was very lucky he did because the landlady was beginning to think that they had the sleeping sickness. Dawson, '18, is reported as being quite love-sick, while Felsenthal, '21, is looking for a job. Farrand, '21, is reported as entertaining a group of young ladies every Sunday afternoon with his violin. It is also reported that Thurston, '20, will soon settle in Chicago.

B. R. T. Collins, '88, our representative on the Alumni Council has invited any member of the Technology Club of Chicago who is east to play golf at his expense on Chebeague Golf Club down in Maine next August. Apparently Collins must be a wonderful player himself and must expect to make it up on the side.

John L. Putnam, '96, died at his home 5752 Winthrop Avenue, Thursday, February 23. The funeral was Saturday afternoon, February 25, and interment was at Graceland Cemetery, Providence, R. I.

In the last five months the following thirty-five Tech men have attended five or more of the weekly lunches at the Engineers Club: E. L. Andrews, '94; N. E. Baxter, '14; H. C. Blake, '06; William T. Blunt, '74; J. C. Bollenbacher, '09; J. M. Brown, '97; J. H. Brown, '05; F. D. Chase, '01; G. N. Davis, '19; W. W. DeBerard, '01; G. W. Farmer, '86; R. Felsenthal, '21; J. M. Fitzgerald, '02; P. M. Flagg, '17; R. D. Flood, '96; J. M. Frank, '07; Lonsdale Green, '87; J. C. Irwin, Jr., '18; G. B. Jones, '05; H. W. Kern, '90; K. T. King, '15; J. R. Longley, '18; J. W. McCausland, '18; J. O. Merrill, '21; H. M. Montgomery, '79; C. B. Page, '99; G. P. Palmer, '04; H. S. Pardee, '09; R. M. Phinney, '04; G. W. Pollock, '21; Howell Taylor, '14; D. A. Tomlinson, '12; R. W. Weeks, '13; E. M. Woodward, '17; G. T. Wooley, Jr., '15.

To date, fifty-four men have indicated that they will be in attendance at our annual dinner and we hope the final score will be well up towards a hundred.

At our luncheon March 7 I announced again that all copy for the

next issue of the REVIEW must be in soon and requested news items from the twenty-one men present. The following data are the result of their joint efforts: L. C. Clarke, Jr., whose wife evidently reads *Voo Doo*, says that she is afraid his morals might be corrupted by too much contact with Tech men and that, therefore, he is only allowed to go to the Tech lunches about once in six months. T. M. Lothrop, '95, advises that he has recently heard some horrible rumors regarding *Voo Doo*. Some sweet young thing who is now at Wellesley told Mrs. Lothrop that the Wellesley girls were not allowed to read it. We all inferred from Mr. Lothrop's remarks that its arrival was anxiously awaited by the entire Wellesley population.

The present business depression seems to affect our men in widely different ways: Pemberton, '03, is possibly the hardest hit because he is able to get a hair-cut only every two months. On the other hand, Howell Taylor, '14, says that he is still drawing his pay check regularly and Bob Flood, '96, advises that his business is so good that he will have to pay an income tax for the first time.

R. M. Phinney, '04, who is an ardent member of the American Legion, and wears several decorations, advises that he is not in favor of the Soldier Bonus, but will be glad to collect his "if, as, and when issued." H. I. Lewis is more optimistic about the bonus and, in anticipation of early results, came to the lunch today and spent some of the bonus which he hopes he will get. H. C. Blake, '06, wants to see every Tech man eat more pork and less beans in order to help lift the packing business out of the slough of despond in which it is now wallowing. You know Blake is an important official of Morris & Co.

J. H. Carr, '21, nearly received a *Tribune* prize for heroism the other day when he caught a burglar red-handed in his room and just rescued his Baby Ben in the nick of time. If he had been a few minutes later he would never have been able to reach the office on time in the mornings. Norman Dawson, '18, swears that he has not been doing anything remarkable and that he does not want any information regarding him published in the REVIEW. Such modesty surely deserves more attention than we are able to give it.

THE ANNUAL DINNER

The annual dinner was held Tuesday evening, March 14, at the Engineers Club, and drew the largest attendance of any Tech Dinner in Chicago since I have been out of college with the exception of the big reunion in 1914. The dinner was attended by about thirty per cent of the Tech men in Chicago, there being 105 Tech men and guests present. Mr. Everett Morss, the new Treasurer of the Institute, was the only speaker and the large attendance was a tribute to his popularity and drawing power. The general plan was to have a lot of fun and entertainment during the dinner and for a short time afterward, and then to have Mr. Morss' talk. The entertainment consisted of music, songs, lantern slides, movies of Tech, a number of contests and a demonstration of the wireless telephone.

Through the energy and courtesy of B. R. T. Collins, '88, our representative on the Alumni Council, we had two moving pictures of the Institute, one showing a Tech Field Day, and the other showing "A Technique Rush" and also about fifty lantern slides of the Institute. Mr. Collins has been a very able representative and, as a mark of our appreciation of his work, the following resolution was unanimously passed: *Resolved*, that the Technology Club of Chicago greatly appreciates the able work of B. R. T. Collins, '88, its representative on the Alumni Council, and hereby extends to him our hearty thanks.

Mr. Collins sent us one hundred place cards, giving a photograph and short description of the proposed Technology Bridge across the Charles on Massachusetts Avenue. Every one was much interested in this proposed bridge, and the following resolution was unanimously passed: *Resolved*, that the Technology Club of Chicago believes that the open waters of the Charles River Basin should be preserved, and is in hearty sympathy with the movement to build a new, substantial and imposing bridge on the line of Massachusetts Avenue as a War Memorial.

For the past few weeks the *Chicago Tribune* has been running a horoscope contest wherein a prize was awarded each day to the luckiest name that was sent in. For this dinner, Frank, '07, devised a "horror-scope" contest. One of these blanks was placed at each plate and after being filled out by the men present, the blanks were collected and the horoscopes read by one of the entertainers. She decided that J. H. Pratt, '12, was the luckiest man present. His first name stood for "Sweetness and light;" his second name for "Oh, Gracious!" and his last name for "You poor prune." As he was hardly to be held responsible for his last name that did not count in the horrorscope contest. As he did not have any mother-in-law he was indeed lucky and as his wife and sweetheart were one and the same person, it indicated unusual discretion, and the size of his collar — $14\frac{1}{2}$ — was exceptionally lucky because that was the exact age to a day at which Julius Cæsar donned his first pair of long pants. The prize awarded him was a pair of large-sized dice for gambling on the lawn, each dice being about three inches square. Pratt immediately rolled them with the entertainer who awarded them to him and as he won her evening's earnings in less than three minutes, he was indeed a lucky man.

J. C. Bollenbacher, '09, won the prize for the newest daddy, the prize being a silver baby spoon. His newest baby was exactly five months and seven days old and none of the others could compete with him, although several claimed that they would have undoubtedly won the prize if the dinner had been postponed a few days. Banash, '06, and Pollock, '21, objected to the baby contest as being unfair to the unmarried men.

Just before the war when Kenneth Lockett was president of the Technology Club, a small silver loving cup was awarded to the class having the largest attendance at that dinner. 1912 won it then with six present. This year 1912 donated the cup again to the class having the

largest attendance, but lost it because the five 1912 men present were outdistanced by the seven representatives of the Class of 1918. The cup is now in the custody of J. W. McCausland, who has promised that his sister will keep it polished and shiny and ready for use again next year.

There was considerable argument as to the man with the widest grin, but it was finally decided by drawing lots that W. F. Dolke, Jr., '08, had the best grin and would make a hit on the vaudeville stage. His prize was a silver cocktail shaker which is indeed enough to produce a grin on any one at the present time.

The notoriety contest was decided by popular vote, and eight different Tech men were awarded prizes for being the most notorious in their respective lines: viz, politest man, H. M. Montgomery, '79, dollar bill; biggest liar, R. D. Flood, '86, fish hook; best dressed, E. D. Hale, '16, looking glass; hardest drinker, J. W. McCausland, '18, bottle of booze; cleverest man, H. C. Blake, '06, tool case; handsomest man, H. W. Kern, '90, pocket comb; most profane, J. R. Longley, '18, small Bible; most popular man, F. K. Copeland, '76, scrapbook.

Copeland's success in getting Mr. Morss to attend our dinner undoubtedly entitled him to first place as the most popular man. The fish hook was emblematic of Baron Munchausen; a well dressed man always requires a looking glass, while a clever man always carries a small tool case in his pocket; a handsome man needs a pocket comb to keep his appearance up to standard, while a profane man should study the Bible. McCausland swears that he never took a drink in his life, but the vote was overwhelmingly to the contrary.

There were six contestants for the best story: Sol Sturge, '87; M. J. Sturn, '96; R. D. Flood, '96; P. W. Moore, '01; F. D. Chase, '01; S. D. Flood, '90.

By popular acclaim, the prize, a nice comfortable pipe, was awarded to R. D. Flood, '96. However, after Everett Morss got up to speak he told a story which the audience swears was infinitely better than the one winning the prize, but in spite of all persuasion, Flood insisted on retaining the newly christened pipe between his own teeth.

Mr. Morss prefaced his remarks with an outline of what occurred at the time of death of President Maclaurin. It was necessary to provide an organization to carry on the college work while there was no president. To do this a part of the Executive Committee consisting of five members, and the Treasurer, handled all financial matters, while three of the professors were appointed as a committee to handle educational matters. It was found that this arrangement did not work out very satisfactorily so that one of the Executive Committee members sat in conference with the Educational Staff when necessary to determine policies requiring financial expenditures. Prof. Elihu Thomson was elected Acting President for the purpose of signing documents only.

Mr. Morss told us of the hard work they had in getting a new president and of the disappointment when President Nichols' health failed. He also advised that they had no man in view for president,

but that they are investigating the qualifications of a number of men. He told us that the geological and mining departments had been combined; that the medical department had been expanded; that all students were now required to have a medical examination; that the Institute had grown since 1918 from 2,000 students to 3,500, thus requiring a considerable expansion of the teaching staff.

He reported that a study was being made of the cost of teaching to determine, if possible, economies which could be accomplished without lowering the standard of education. He stated that they have already found that large class units did not necessarily mean poor education, and cited an example where two sections, combined under one professor, passed better examinations than single sections under other professors. He advised us that the United States Army had turned over to Tech their ordnance school and that a building 45 by 90 had been constructed to hold gas engines used in this department, the Government furnishing the gas engines; that the 4½ foot wind tunnel had been rebuilt and a new wind tunnel eight feet in diameter furnished for the use of the Aero Service. It seems that this branch of the service is being given considerable attention at this time. He also advised us that the mining department had given up their summer school in Vermont and are now using the Repogle Mine in New Jersey.

The Cafeteria in the Walker Memorial building had been operated at a loss exceeding \$21,000 a year, until this past year, when it was placed under the supervision of a man who runs cafeterias in Boston, who has succeeded in making the restaurant pay its own expense, and at the same time has improved the food and reduced the prices thus eliminating complaints.

At the present time the greatest need of Technology is dormitories. It seems the only dormitory now in use will hold approximately 275 men, and that fraternity houses will take care of another 150, a very small proportion of the student body. Mr. Morss showed us plans of a dormitory to be built to hold 1,600 students which he estimated will cost around \$3,000,000. It will also be necessary to provide a fund to operate these dormitories because the experience of other colleges indicates that dormitories are generally run at a loss.

Mr. Morss outlined the increase in salaries of the instructing staff, the lower grades receiving the largest increase, so that the heads of the departments now receive \$6,000 a year, professors \$5,000 a year and assistant instructors \$1,000 a year.

He advised us that arrangements were being made to purchase the B. A. A. Boat House, and lease the ground from the Park Board. With the boat house, Tech will get six shells. This will provide boat facilities. He also told us of the large increase in varsity athletic teams, and the interest shown in all branches except football.

Mr. Morss' talk was very interesting and he gave us the impression that conditions at Tech were such that we should all be optimistic as to the future. From a financial standpoint the college is in better shape than ever before, and while additional funds will be needed for dormi-

tories, yet he felt that we were getting along very well. He also said that they hope to have a man ready to be inaugurated as president by next June, although he could not promise it at this time.

Pen Dell, '98, and Weeks, '13, had secured and set up a wireless telephone outfit, with a loud speaking attachment through which we listened to the concert sent out by the Commonwealth Edison Co. after Mr. Morss had concluded his remarks. A few minutes later Mr. Morss arrived at the sending station at the Edison Building and gave a short five-minute talk into the transmitter which was heard very distinctly, not only by the hundred men at our dinner, but also by the greater part of the four thousand people who have installed wireless receiving sets in their homes in Chicago and vicinity. This was quite a novelty and it seemed miraculous that the wireless waves could be picked up so distinctly by a small wire stretched along the dining room table and amplified so that over a hundred men in a fair sized room could hear the remarks distinctly.—*D. A. Tomlinson, Secretary-Treasurer, 111 West Washington Street, Chicago, Ill.*

CHINA — TECHNOLOGY CLUB OF SHANGHAI.— We regret that, in the past, the Technology Club of China, as the organization here was then called, has been rather a dead issue. However, the Club has now been rejuvenated under the name of The Technology Club of Shanghai, and we are now out to make the new organization something of which any Tech man can be proud.

The membership of the Club is composed of thirty-two Chinese and ten Americans. The officers are as follows: Chairman, V. Fong Lam, Lam Glines & Co., Inc., 4B Peking Road, Shanghai; secretary-treasurer, Robert P. Sherman, Standard Oil Co. of N. Y., Shanghai; assistant secretary-treasurer, T. K. Kao, Lam, Glines & Co., Inc., 4B Peking Road, Shanghai.

The Club meets on the first Tuesday of each month with the special meetings as called in between. The Tuesday in January is a noonday meeting, the Tuesday in February is an evening dinner meeting; and so on, alternating between noonday and dinner meetings throughout the year. The general election of officers takes place at the December meeting, and the new officers take office at the January meeting.

We regret to announce the death of our former secretary-treasurer, N. T. Catlin, '18, which took place in Shanghai on November 8, 1921. Mr. Catlin was ill but a short time, and died of acute peritonitis.

We can assure any Tech men that happen into Shanghai a very hearty welcome. The noonday meetings are usually held at the Carlton Cafe, and the dinner meetings at the Union Club. However, we are liable to change the place of meeting at any time, and any men coming to Shanghai had better look up one of the officers at the addresses given above.

The following is a list of Shanghai Tech men and their addresses:
Y. T. Chang, 17, 61 Rue de Consulate, care Yek Hua Trading

Corporation; Sidney Chen, '13, 20 Rue Bourgeat; H. K. Chow, '14, Han Yeh Ping, Iron and Coal Co., 36 Szechuen Road; M. Chow, '15, University of Communication, Siccawei Road; Edward L. Clark, '17, International General Electric Co., Inc., 15 Robinson Road; E. A. Ekdahl, '16, Amos Bird Co., Yangtsepoo Road; M. C. Guss, '16, Standard Oil Company of New York; C. P. Hsueh, '19, Woo Sung Port Improvement Administration, Woo Sung; T. C. Hsi, '15, 579 Burkill Road; T. Hsi, '14, China International Corporation, 51 Kiangse Road; P. H. Hsu, '14, International Dispensary, Soap Factory, Si-Ka-Wei; K. P. Hu, '19, and C. Y. Huang, '19, Lam, Glines & Co., Inc., 4B Peking Road; H. H. Huang, '17, Han Yeh Ping Iron and Coal Co., 36 Szechuen Road; S. Y. Hung, '19, Nanyang Trading Co., 12 Nanking Road; T. Kao, '15; Lam, Glines & Co., Inc., 4B Peking Road; Y. M. Kuo, '19, care South Eastern Engineering and Construction Co., 51B Kiangse Road; V. Fong Lam, '16, Lam, Glines & Co., Inc., 4B Peking Road; S. K. Lau, '19, Great China Cotton Spinning Mill, Woo Sung; Long Lau, '14, and K. C. Li, '21, Lam, Glines & Co. Inc., 4B Peking Road; K. T. Lee, '19, 59 Seymour Road; F. C. Mabee, '07, Shanghai Baptist College; F. W. McIntyre, '02, Andersen, Meyer & Co. Ltd.; H. F. Merrill, 2d., '14, Standard Oil Co.; E. C. Miao, '18, China Rug Co., F-94 Bubbling Well Road; R. P. Sherman, '15, Standard Oil Co.; T. S. Sih, '18, Great China Cotton Spinning Mill, Woo Sung; F. R. Sites, '99, United States Steel Products Co., 1 The Bund; W. H. J. Taylor, '12, St. John's University, F. C. Tsu, '20, and T. F. Wei, '20, Lam, Glines & Co., Inc., 4B Peking Road; Hin Yung Tu, '17, T. M. Wu, '17, K. F. Yao and C. F. Yeh, '17, Kiangnan Dock and Engineering Works; T. C. Yeh, '19, Shanghai Commercial and Savings Bank, North Szechuen Road; M. S. Zhen, '14, 66 Rue Baron Gros; W. S. Woo, Kiangnan Dock and Engineering Works, E. C. Holbrook, '12, American Trading Co.; W. P. Loo, '16, no address; S. L. Ware, '06, 39 Sinza Road. — *Robert P. Sherman, Secretary, Standard Oil Co., of New York, Shanghai, China.*

CINCINNATI — THE CINCINNATI M. I. T. CLUB. — The annual meeting was held March 11 at Goodwin's Cafe. The following men were present: Brotherton, '73; Merrill, '88; Matthews, '92; Procter, '94; Sax, '96; Davis, '97; Pugh, '97; Rapp, '03; Tarbett, '05; Bragdon, '07; Loring, '07; Morrill, '07; Orr, '08; Ransohoff, '10; Strong, '11; Kruckemeyer, '11; Hargrave, '12; Campbell, '14; Weissbach, '16; Rood, '16; Hopkins, '16; Wright, '19; Green, '21; Regan, '21. After a dinner the annual election was in order. A committee consisting of Kruckemeyer, Procter and Davis reported the following slate which was unanimously elected: president, Prof. A. P. Matthews, '92; vice-president, H. D. Loring, '07; secretary, F. W. Morrill, '07; treasurer, David Davis, '97; executive committee, Nathan Ransohoff, '10. The following member of the executive committee continues in office: W. E. Brotherton, '73.

The new president expressed his thanks in happy fashion and the

meeting then adjourned to the bowling alleys. Words are poor, weak things, let the figures speak for themselves.

Campbell's Kids.....	581	610	1,191
Hargrave's Hopes.....	527	547	1,074
Strong's Citrons.....	469	505	974
Tarbett's Tigers.....	445	512	957

At a late hour when the scribe left for home, Hargrave's team was going after that third string.—*F. W. Morrill, Secretary, Third and Elm Streets, Cincinnati, Ohio.*

CLEVELAND — TECHNOLOGY CLUB OF NORTHERN OHIO.— A dinner meeting of the Club was held February 7, at the University Club and was well attended. Mr. Brent A. Tozzer, a Purdue alumnus, gave a very interesting account of a recent trip through China, Java, India, Malay States, Indo China, etc. Mr. Tozzer, in addition to being an engineer and machine tool expert, proved to be a wonderfully keen observer of humorous and non-technical matters. The talk was very much more than a record of his industrial survey of the Far East and kept all hands much amused till almost midnight.

A number of additions and changes have been necessary in the local address book:

Henry D. Jouett, '00, has recently moved from New York to Cleveland to take charge of the engineering work of the new Cleveland Union Station project. He was formerly Terminal Engineer for the New York Central Lines at Grand Central Terminal.

Gordon M. Fair, '16, who has spent considerable time abroad in reconstruction and sanitary work with the Red Cross, has recently come to Cleveland and is located with the Public Health Association here. The local group temporarily loses one of its most genial members by the leaving of Hubert Merryweather, '04, to take charge of the affairs of the Bethlehem Cuba Iron Mines Company at Santiago, Cuba.

Weekly luncheons of an informal kind are going on regularly, Fridays, at 12.30 in the Engineering Society rooms of the Hotel Winton. Transients take notice.—*A. A. Gould, Secretary, 3813 Euclid Avenue, Cleveland, Ohio.*

DAYTON — DAYTON TECHNOLOGY ASSOCIATION.— The Technology Club of Dayton held its annual meeting and election on February 27 at the Engineers Club. The dinner was held in the College Room of the Club. There was a very good attendance, thirty-six Tech men were present. Professor Lewis made a special trip from Boston to explain the work of the chemical post-graduate department. A very interesting discussion followed the talk given by Professor Lewis. Mr. Arthur E. Morgan, president of Antioch College, was present and Professor E. A. Hitchcock of Ohio State University and Mr. J. A. Hunt of the General Motors Research Division.

New officers were elected for the coming year. Mr. Kenneth M. Lane of the experimental engineering department of the General Motors

Research Corporation, was elected president. Mr. A. S. Niles of McCook Field, vice-president and M. J. Gibbons, Jr., secretary and treasurer.

The Technology Club of Dayton have noon luncheons every other Saturday at the Engineers Club.— *M. J. Gibbons, Jr., 22 Oxford Avenue, Dayton, Ohio.*

DETROIT — DETROIT TECHNOLOGY ASSOCIATION.— We have not been very active here this winter, although we have been holding our monthly lunches, and have had two or three evenings in the bowling alley.

We are contemplating getting up a party the early part of April to go out to the Ford Blast Furnaces and see their big foundry. We will probably have a luncheon on a Saturday noon and go out to the plant in the afternoon.

The latter part of April, we will have a meeting at the University Club Bowling Alley, at which time we will have our annual election of officers.— *O. M. Davis, Secretary, 800 Twenty-Fifth Street, Detroit, Mich.*

DULUTH — TECHNOLOGY CLUB OF LAKE SUPERIOR.— The Technology Club of Lake Superior with headquarters at Duluth has only fifteen active members, but this membership is not concentrated at Duluth. Our club includes Tech men living at Superior, Wisconsin, Two Harbors, Minnesota, and at some of the Iron Range towns. The fact that our membership is so scattered accounts for our rather infrequent gatherings. The few meetings that we do have, however, are invariably well attended and there is always a wholesome display of Tech spirit, and an active and interesting discussion of the various phases of Technology, past and present.

Our annual meeting and dinner was held last Friday evening, January 20, at the Kitchi Gammi Club, Duluth, with nine members and one guest present. The members present were Leland Clapper, Two Harbors; W. C. Lounsbury, Superior; L. D. Davenport, Hibbing; and C. D. Brewer, W. R. Peyton, D. H. Radford, C. D. Steele, Walter G. Zimmerman, and J. A. Noyes of Duluth. Our guest was Mr. W. G. Swart, vice-president and general manager of the Mesabi Iron Company of Babbitt, Minn.

Following our very satisfying dinner, Mr. L. D. Davenport, Class '07, Course I, gave us a very interesting and entertaining account of his recent three months' trip to the Orient as one of the six members of the American Engineering Commission, that was retained by the South Manchurian Railway Company to inspect their coal mining and iron mining operations in South Manchuria. Mr. Davenport was for a number of years the chief mining engineer at Hibbing, Minnesota, for the Oliver Iron Mining Company, a subsidiary of the United States Steel Corporation. His long experience here on the Mesaba Range made him well qualified to act as an authority on open pit mining, which was one of the principal problems confronting the Fushun Colliery interests. Mr. Davenport gave us some very interesting comparisons between the

slow hand methods now employed at these Manchurian properties and the modern machine methods, which have become considered standard practice in the United States. He also outlined in a general way some of the changes which are to be instituted as a direct result of this visit of the American Consulting Board. In addition to the technical phases of his subject, Mr. Davenport also told us in detail about a number of his odd and interesting personal experiences while being entertained in Tokyo, Kobe, Diren, and other Oriental cities which were visited. Mr. Davenport expects to return to the Orient within the next few weeks to take full charge of the open pit coal mining operations at Fushun.

The business meeting followed Mr. Davenport's talk, and, in the absence of our president S. B. Sheldon, vice-president Walter G. Zimmerman presided. The elections of officers to the Technology Club of Lake Superior are at best very informal affairs, but it was mutually agreed by all present that the following officers should represent the club for the coming year: President, Walter G. Zimmerman, care American Bridge Company, Wolvin Building, Duluth; vice-president, C. D. Brewer, care Duluth Crushed Stone Company, 1506 Alworth Building, Duluth, and secretary-treasurer, J. A. Noyes, care Sullivan Machinery Company, 910 Alworth Building, Duluth.—*J. A. Noyes, '12, Secretary-Treasurer.*

INDIANAPOLIS — INDIANA ASSOCIATION, M. I. T.—The Indiana Association meets monthly on the third Friday at 6.30 p.m. for dinner, usually at the University Club. The meeting follows the dinner.

At the January meeting William G. Wall, '96, of the National Motor Vehicle Co. was elected president. Joseph W. Stickney, '96, of the Fletcher American Co. was chosen as vice-president, and Edwin M. McNally, '18, was made secretary-treasurer. Alex Holiday, '99, last year's president, gave an interesting talk about his trip to Boston and to the Institute, giving us some very welcome news of the Institute and its activities.

The February meeting was made interesting by Norman D. Doane, '15, who spoke on "The Necessity of an Embargo to Protect the Coal Tar Industry."

At the March meeting we had Dean A. A. Potter, '03, of Purdue University with us. Two of his colleagues came down with him, Prof. William Turner, '86, and Mr. N. T. Bourke, '19, all of them Tech men.

Dean Potter, who is dean of the four engineering schools at Purdue, is a young man of magnetic personality and of a tremendous amount of energy and enthusiasm. He told us of his work in Humanizing Education at Purdue, how the freshmen are brought in contact with the higher professors, the method of introducing the freshmen to the different branches of engineering through a system of problems so designed as to create interest and at the same time give a broad knowledge of engineering fundamentals, of his system of Personnel Records. The freshman problem system was very interesting. Every man, irrespective of course,

solves simple but very complete problems of each principal branch of engineering. Aside from the interest created and the broad fundamental knowledge obtained, the student appreciates the necessity of the thorough study of mathematics, economics, English, etc., all of which points are skillfully worked into the problems. Since each man solves problems in each of the principal branches of engineering, his choice of a particular branch is made easier and less likely to be based on misconception.

Our meetings are quite informal, so there was considerable interesting discussion regarding Dean Potter's system. Professor Turner spoke briefly and entertained us with selections on the harmonica. Not to be outdone Dean Potter played some Russian folk songs on the ocarina, commonly known as the "sweet potato." There were twenty-seven men present at the meeting, practically every Tech man in the city.—*Edwin M. McNally, Secretary, care Allison Engineering Co., Indianapolis, Ind.*

MILWAUKEE — TECHNOLOGY CLUB OF MILWAUKEE.—The local club of Milwaukee has revived itself again by having weekly luncheons at the University Club every Thursday. There are about forty-five men in the vicinity within reach of the Club who could have an interesting hour if they would remember to come. It is not necessary for them to be members of the University Club because special arrangements have been made for these luncheons.—*Edwin L. Smith, Secretary, 539 Bellevue Place, Milwaukee, Wis.*

NEW YORK — TECHNOLOGY CLUB OF NEW YORK.—Annual dinners for M. I. T. alumni in and around New York have not been held for several years but the custom was reinstated on February 8 with one of the best meetings ever held here. Over two hundred Tech men were present. T. D. A. Brophy, '16, president of the Technology Club, presided and R. S. Allyn, '98, was toastmaster. Among other speakers, Mr. Walker D. Hines told of his work in Europe as Arbitrator last year; Mr. Ernest Abbott talked on the recent Peace Conference at Washington and Mr. Arthur D. Little, '85, told of alumni activities. The dinner was held at the McAlpin in a room designed by a Technology architect, J. M. House, '98, with an appropriate color scheme of cardinal and gray.

The Monday night talks, organized by E. P. Brooks, '17, early in the winter, have been a great success and are still growing in popularity and attendance. These talks are open to all M. I. T. alumni and will probably continue through April into May. Any Tech men in the city on Monday nights will find a cordial welcome and an interesting speaker at the Technology Club. Some of the recent speakers and their subjects were: Dr. William H. Cressy, "Recent and past experiences in Mexico;" Dr. Carl. A. L. Binger, "Anglo-American Expedition of Medical Scientists to the top of the Andes;" Major Elihu Church, Transportation Engineer of the Port Authority, "New York Port Authority's Plans."

The Committee of Twenty-Five, with R. S. Allyn, '98, as chairman, appointed at a mass meeting of Technology alumni about a year ago, published its report in December. The purpose of this committee was to go into the whole matter of Technology representation in New York and make constructive suggestions. Its report, the result of exhaustive study, was sent to about three thousand alumni. Perhaps the most important finding was that the Technology Club should move up town to the 42d Street district. In this connection a committee has been appointed by the Board of Governors, with L. C. Hammond, '02, as chairman, to find new quarters up town and devise a method of financing such a step.

The winter bridge tournament unearthed many enthusiasts and the winner, H. B. Chalmers, '01, had keen competition. A spring tournament is promised.

Billiard and pool tournaments are now in progress.

An up town Tech Lunch has been organized to take place the first Wednesday of each month at 12.30 in the grill of the Hotel Lorraine at Fifth Avenue and 45th Street.

The club restaurant is increasingly patronized and the quality of the food and service remains impeccable.—*R. H. Scannell, '17, Secretary, 17 Gramercy Park, New York, N. Y.*

PHILADELPHIA — TECHNOLOGY CLUB OF PHILADELPHIA.—The Technology Club of Philadelphia has had quite a busy time since we last sent in an account of our doings to the REVIEW. We have had two meetings, a trip and a dance. On January 4 we had our monthly meeting at the Engineers Club preceded by dinner. We had a very good gathering, thirty members for dinner and about thirty-five for the meeting. Our speaker of the evening was W. T. Herr, Vice-President of the Westinghouse Electric and Manufacturing Company. Mr. Herr talked about steam turbines and illustrated this interesting talk by slides.

An inspection trip through the office of the Bell Telephone Company of Pennsylvania was arranged by our Entertainment Committee, E. M. Pace, Jr., '17, chairman. This event took place on Saturday afternoon, January 21, 1922. Before the trip, an informal luncheon was held at the Hotel Aldine. Over fifty members, wives and children turned out for this trip. When we arrived, F. J. Chesterman, '05, Bell Telephone Chief Engineer, had a very excellent tour all mapped out. After a preliminary talk and switchboard demonstration, the party was split up in groups of five or six and each headed by a Bell Telephone Technology man was conducted through the establishment. It was a treat for us all and many of us will now realize the operator is not always to blame.

Our informal dance was held at the Hotel Aldine on Friday evening, February 3, 1922. Over fifty couples were present. The music was excellent, everybody had a dandy time, everyone hated to leave when we closed at midnight; furthermore, the Club cleared nearly fifteen

dollars. Considering the above, the entertainment committee and the treasurer were both much gratified.

Last week, March 1, our monthly meeting was held at the Engineers Club. This meeting was made a joint one with the Worcester Technology Club. Our speaker of the evening, R. M. Bassett, of the Sanford Riley Stoker Company, gave us a very novel film, showing a stoker at work with a fire burning on it. These pictures were taken with great difficulty because the lens of the camera had to be well protected from the intense heat of the fire. This meeting was well attended, as many of our members, their guests, and the Worcester Techites had stokers in their plants and wished to learn more of their operation.

Our Thursday luncheons at Wanamaker's Tea Room, 12.30 P.M., are growing rapidly. Our record to date is fourteen present. John Wanamaker had to put in a larger table for us, and if we keep on growing we may need two.—*Dexter A. Tutein, 1607 Real Estate Trust Building, Philadelphia, Pa.*

PROVIDENCE — TECHNOLOGY CLUB OF RHODE ISLAND.— It is with great regret that we advise of the death of Mr. Frank Livermore Pierce, of the Class of '89, Course II. Mr. Pierce, whose residence was at 169 Brown Street, Providence, was the president of the What Cheer Mutual Fire Insurance Company. He has always been an extremely popular and loyal Tech man, the loss of whom the community at large, and his friends, and the Technology Club of Rhode Island, will deeply mourn.—*Howard C. Fisher, Secretary, Slater Trust Co. Building, Pawtucket, R. I.*

ROCHESTER — TECHNOLOGY CLUB OF ROCHESTER.— Seldom, if ever before, has the Technology Club of Rochester put across a season's program of such significance as this year. The Glee Club concert in December was one of the most brilliant and successful events held in the city this winter and on March 18, Technology played by far the principal part at the banquet of the local engineering societies, celebrating the quarter-centennial anniversary of the Rochester Engineering Society, which was the most ambitious and successful event in the history of the professional engineers of the city and attended by some four hundred engineers, besides ladies and guests in the balconies. The honorary chairman of the joint committee in charge of this occasion was Frank W. Lovejoy, '94, and the chairman Waldo G. Wildes, '01. On the committee were also J. Howard Cather, '12, and Frank C. Taylor, '11. At the speakers' table a "bloc" of Tech men upheld the supremacy of the Institute, among them Harold O. Stewart, '09, president of the Rochester Engineering Society; John F. Ancona, chairman of the local section of the American Society of Mechanical Engineers; Sidney Alling, chairman of the Rochester section of the American Institute of Electrical Engineers, and Harold L. Smith, '18, president of the Rochester Society of Technical Draftsmen.

A unique feature of this occasion was the lighting and decoration of the large banquet hall of the Powers Hotel, which was undertaken

by Mr. Claude Bragdon, an architect of Rochester and New York City, who added to a reproduction of the effects he had introduced with notable success at Carnegie Hall, New York, an immense screen set out from the wall, draped and illuminated with light shining through a vast pattern of intricate design in many colors. This, combined with lanterns similarly glowing with mellow light from beautiful multi-colored designs and a galaxy of candles and Venetian pieces, suspended among wreaths and festoons of greenery, gave a marvelous setting for the scene and the varied program.

Following song, jest, prize awards and bestowal of honorary membership, came the event of the evening, the address of John R. Freeman, '76, president of the American Society of Civil Engineers, who exhibited a choice selection of his fine Chinese and Far-Eastern slides, discussed general conditions and especially the problems of flood control and consequent relief to the people of China, thus giving that final necessary touch of the great humanist to the occasion, as well as of the great engineer.

Of course, the Technology Club was alive to its opportunity to emphasize in a proper and becoming way the predominance of the Massachusetts Institute of Technology and took occasion to hold a luncheon at the Rochester Club at noon, where Mr. Freeman was the guest of honor and spoke briefly and informally. The compliments extended the committee from every side seem to indicate that all the events of the day did credit to the Technology reputation for doing things right when the chance comes their way and incidentally precipitating the chance.

The Club will participate in the college men's picnic, which is to be revived again this summer for the first time since the war.—*G. T. Lane, Secretary, Eastman Kodak Co., Rochester, N. Y.*

SAN FRANCISCO — TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA.— At the January luncheon of the Tech Alumni Association of Northern California, an account of "Sulphur Mining in Texas" was given by Paul R. Austin, Jr., '16. Seventeen members were present including members of various classes from '74 to '21.

At our February luncheon, J. C. Dort, '09, who is with the United States Forestry Service, gave a talk on "Water Power Reconnaissance in South Eastern Alaska." Mr. Dort is to return to Alaska this summer to carry out further work on this subject, so we hope to hear from him again this fall.

Our March luncheon is to be on Tuesday, March 28, when we shall hear from Ray J. Barber, '06, on "Placer Mining in California."

We plan to have one of our members give an informal talk on some subject of general interest at each monthly luncheon and this usually leads to a discussion which lasts until it is time to adjourn.—*P. R. Parker, '03, Secretary, 507 Montgomery Street, San Francisco, Cal.*

SCHENECTADY — TECHNOLOGY CLUB OF EASTERN NEW YORK.— On January 2, the Technology Musical Clubs gave a concert and dance at the Mohawk Golf Club, Schenectady, under the auspices of the local alumni. The occasion was made an opportunity for a general gathering of Technology men, although attendance was open to all. About two hundred persons enjoyed the affair, and that enjoyment was shown by the many favorable comments made on the accomplishments of the Musical Clubs. President Richmond of Union College expressed particular appreciation of the work of the chorus and others praised the violin soloist, the slight of hand artist and the general conduct of the students.

On March 8, Mr. D. B. Ruchmore of the General Electric Co. was the speaker at a club luncheon. He discussed some of the problems which must be faced by the salaried engineer, to which class many of the club members belong, and elicited a very lively interest from his audience.

On March 17, the Course XV students, who were making a spring inspection trip under the guidance of Professor Schell, visited Schenectady. They were shown over the General Electric Works in the morning and the American Locomotive Works in the afternoon. Professor McKibben extended the hospitality of Union College to the party at supper time and they ended the day by attending the theatre in Albany. — *Philip L. Alger, Secretary, 305 Rosa Road, Schenectady, N. Y.*

ST. LOUIS — ST. LOUIS SOCIETY OF THE M. I. T.— The Technology luncheons held on the first Wednesday of each month at the Planters Hotel are growing in popularity. We are becoming much better acquainted with one another since the practice of lunching together was started, and are being introduced to new men at nearly every meeting. The younger men are far more regular in attendance than those who have been out over ten years. All Tech men are invited to these luncheons, which are held at the Planters Hotel on the first Wednesday of each month at 12.30 P.M.— *Benjamin F. Thomas, Jr., Secretary, 3869 Park Avenue, St. Louis, Missouri.*

WASHINGTON — WASHINGTON SOCIETY OF M. I. T.— The annual meeting of the Washington Society was held at the City Club on February 4, with sixty-one members present. Mr. John R. Freeman, '76, president of the American Society of Civil Engineers, was the principal speaker. He told the Society that the country needed more men of vision, men with the human touch, and that engineers and graduates of Tech should be such men. Dr. George W. Field, a former instructor at the Institute, who has recently returned from several years' stay in Brazil, and Brig.-Gen. W. H. Bixby, '73, former chief of engineers of the United States Army, also spoke. George A. Ricker, '86, the retiring president, acted as toastmaster. Officers for the coming year were elected as follows: J. W. Clary, '96, president; Starr Truscott, '07, vice-president; F. W. Southworth, '00, treasurer; G. A. Ricker, '86, member

of the executive committee; and James A. Tobey, '15, secretary. The new president has appointed Edward Stuart, '10, as chairman of the entertainment committee and W. C. Dean, '00, as chairman of the membership committee.

The weekly lunches of the Society have been changed from Tuesdays to Fridays and are held at 12.30 at the University Club, Fifteenth and I Streets. During this year a speaker will give a ten or fifteen minute address at each luncheon. The first guest under this arrangement was Dr. Albert Ross Hill, former president of the University of Missouri, now vice-chairman of the American Red Cross in charge of foreign operations. On February 24, he told the local alumni that they should set an example to Alumni Associations all over the country by taking more interest in seeing that their alma mater maintained high standards of curricula, rather than supremacy in athletics or a big enrollment. On March 3, Dr. Charles G. Abbot, '94, assistant secretary of the Smithsonian Institute, told how he cooked his dinner in a solar stove of his own making and outlined possibilities of harnessing the energy of the sun for practical purposes. On March 10, Prof. F. H. Newell, '85, told of the need for reclamation work in the United States. Professor Newell is consulting engineer and former chief of the United States Reclamation Service. He was the first president of the Washington Society of M. I. T., having been elected in 1899 and re-elected in 1900. Other prominent alumni and outside guests will speak at the luncheons, which are well attended.

A directory of all Tech men in Washington is planned and the secretary is at present gathering data for this book. A questionnaire has been sent to the approximately three hundred graduates in Washington and vicinity. Since next year will be the twenty-fifth anniversary of the Society, a big celebration is planned, and efforts toward this undertaking are already under way. The present year seems to give indications of being a banner one, but it is hoped to surpass it next year.—*James A. Tobey, Secretary, 411 Eighteenth Street, N. W., Washington, D. C.*

WORCESTER — TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY. — The Worcester County Alumni Association are planning a meeting April 8, at the University Club. Mr. Everett Morse, treasurer of the Corporation, has been secured as speaker and we are also endeavoring to get Mr. Donald F. Carpenter, president of the senior class, to speak on "Undergraduate Activities." The committee of arrangements consists of: H. M. Latham, '93, president; C. A. Read, '93; W. M. Bassett, '02; R. L. Fuller, '96; H. L. Robinson, '11.—*H. L. Robinson, '11, Secretary, 14 Rhodes Road, Worcester, Mass.*

NEWS FROM THE CLASSES

1870

From *The Boston Evening Globe*, February 9, 1922: "Charles H. Breck has resigned as president and director of the Joseph Breck & Sons' Corporation. He has transferred his interest in the business to his son, Luther A. Breck, and his son-in-law, John Benbow who, together with his brother, Joseph F. Breck, who is treasurer of the corporation, will continue the business as usual. The house was founded in 1822 (the year Boston became a city) and has been continued without interruption ever since. With the advent of Messrs. Luther A. Breck as president, and John Benbow as vice-president, the fourth generation of the Breck family succeed in the management of the business. Charles H. Breck, a student of the Massachusetts Institute of Technology, entered the store in 1868, became a partner with his grandfather, Joseph Breck, and his father, Charles H. B. Breck, in 1875, and succeeded the latter as president in 1900.

1873

ROBERT A. SHAILER, *Secretary*, 96 Church Street, Winchester, Mass.

The fifty-second annual meeting and dinner of the Class of '73 was held at Young's Hotel, Boston, on January 27, 1922. Present: Francis H. Williams, W. Leman, G. M. Thompson, Philip D. Borden, Hiram W. Blaisdell, Charles Carruth, Frank W. Very, Robert A. Shailer. Letters were read from the following absent members: Belden, Carpenter, Cogswell, Dyer, Felton, Guild, Henderson, Johnston, Kimball, Lodge, Wilder. The following Class officers for the ensuing year were elected:

President, Francis H. Williams; vice-president, Edmond Hayes; secretary and treasurer, Robert A. Shailer; librarian, James E. Stone; executive committee, Albert K. Mansfield and H. Ellerton Lodge.

It was voted that "As the next annual meeting and dinner will celebrate the fiftieth anniversary of the 'Class Graduation,' special effort be made to have all members of the Class Association attend the celebration and that the place, date and all arrangements for same be left for the Class officers to decide upon."

Our beloved classmate, Samuel E. Tinkham, died April 21, 1921. He had been our Class secretary and treasurer from 1898 to above date and to his efficiency and keen interest in all Class and Technology matters much of our Association's success was due. He had endeared himself to all and his death is a sad loss to each member.

1875

E. A. W. HAMMATT, *Secretary*, South Orleans, Mass.

The annual meeting and dinner of the Class was held at the Walker Memorial on Friday, February 24, 1922, at 6.30 p.m., with Bowers, Dorr, Goodale, Hammatt, Hibbard, Lincoln and Nickerson present. Goodale passed round for inspection, the gold medal recently presented to him by the Mining and Metallurgical Society of America, for distinguished services in safety work in mines. Hibbard reminded us that thirty years ago Frank Conover sent a poem to the secretary which was read at the meeting; and as he had a copy of it, at the request of the Class he read it and suggested that it be sent to the TECHNOLOGY REVIEW.

At 7.45 the meeting was called to order for business. The records of the last meeting were read and approved. The secretary-treasurer submitted his reports, which were accepted. After some discussion as to the best time of year to hold the annual meeting

in order to secure the largest attendance, it was voted to amend Article VII of the Constitution so as to read, The regular annual meeting of the Society shall be held at such place and on such date as may be fixed by the executive committee. Under instruction from the meeting, the secretary cast a ballot for officers for the coming year as follows: For president, Thomas Hibbard; vice-president, Samuel J. Mixer; secretary and treasurer, E. A. W. Hammatt; executive committee, the vice-president, E. H. Lincoln and George H. Stoddard and they were declared elected. Adjourned at 9.20 p.m.

Since the last meeting, I have learned of the death of classmates, Charles E. Haberstroh, Ervin S. Hubbard, Henry Simonds and Frank Jackson.

Attention is called to the following changes of address:

William H. Bush, 5796 McPherson Avenue, St. Louis, Mo.; C. A. Church, 9 Maple Street, New Bedford, Mass.; G. H. Eddy, 161 Highland Avenue, Fall River, Mass.; D. W. Phipps, 4304 West Draene Street, Seattle, Wash.; W. F. Sargent, 555 Blackstone Avenue, Chicago, Ill.; W. H. Schockley, 520 Tennyson Street, Palo Alto, Calif.; Charles A. Simpson, R. F. D. 1, Medway, Mass.

The present address or any information regarding any of the men in the following list, is desired by the secretary: Frank S. Blanchard, J. M. Brown, R. J. Dutton, L. H. Faulkner, A. J. Jaquith, James A. Knapp, Almon C. Libby, George Osgood, L. W. Peck, Frank T. Sargent and Charles Terrell.

The following is the poem by Frank Conover referred to above.

"I am still alive —
And every year, when 'seventy-five'
In festive spirit meets at dinner,
I vow, and vow as I'm a sinner
That when again you get together
I'll surely break dull duty's tether
And be with you, what e'er the weather.

But though 'tis true that man proposes,
'Tis also true that God disposes
And, while our plans we're fondly brewing,
Fate works, as well, to our undoing.

You, of the time worn, effete East
Enjoy your reminiscent feast,
We of the West can only say
That at some future happy day
We'll eat and drink and talk with you
And all the ancient ties renew.

Tonight, you lucky ones who sit,
Enjoying interchange of wit
And wine and reminiscence pleasant,
Pray count this absent comrade, present.

With you he turns in spirit back
Along that dim, receding track
Which time makes ever still more dim;
And as he muses, comes to him
The memory of a happy time
When to grow old were almost crime —

When life was young, the future long,
And hearts beat quick and faith was strong,
Failure unknown, unheard of, fear —
Fortune the goal of each career.

Ah me! how soon that dream of youth
Faded before the living truth!

How fate has clutched us by the hand
 And from the easy paths we planned
 Led us in other, harder ways
 Not of our choice — to fate be praise!

These be dull thoughts — this is no time
 To moralize in prose or rhyme —
 All's for the best — our younger dream
 Vanished — a wiser power's scheme
 Moulded our lives more nearly right
 Than we, with our poor human sight,
 Could in our halting way have done.

All's for the best — this be our song;
 Life may be hard, the struggle long;
 What e'er has been, what e'er may be,
 Falling to you, my friends, or me —
 Let us take courage, let us rest
 In that belief — all's for the best.

Now, Hammatt, but another word.
 Stretch your right hand across the board
 And grasp for me the answering hand
 Of each man in your little band —

Tell Beal I little thought he'd sink
 Into a pool of printer's ink —
 I thought he'd be a chemist great,
 Instead — oh, most unhappy fate!
 He to the public now supplies,
 Not alka — but newspaper — lies —

Is Dorr still with you? and is Edes?
 Poor boy, for him my heart still bleeds
 When comes back to my recollection
 His struggles with a Conic Section.

Where's Handy now? Before my sight,
 Are visions of the troublous night,
 When Handy never went to bed,
 But, with wet towel 'round his head,
 With sine and cosine, angle, plane,
 And logarithm, stuffed his brain —

I call up other thoughts of yore,
 Of Hibbard, Mixter, Blodgett, Dorr,
 Of some, now on the other shore.
 But I've no mortgage on your time.
 You're harking for the midnight chime
 And tiring of a prosing rhyme.

Goodnight, my friends, classmates of years
 Whose retrospect more fond appears
 As still the later years obscure
 The view that may not long endure.

Let us be friends — let M. I. T.
 A lasting bond of union be —
 Let memories of 'seventy-five'
 O'er time and distance still survive —

Goodnight again — may time be kind
 To you and yours, and may you find,
 As years are added to the roll,
 No happier page on memory's scroll
 Than that in whose dim lines we see
 The days of old 'Technology.'

The notice of Simonds' death reached me too late to prepare anything for the January REVIEW, so I submit these notes at this time.

Henry Simonds was a son of Frank H. and Charlotte B. (Phinney) Simonds; born at Burlington, Vt., July 10, 1854. As a boy he lived in Belmont, Mass., and was a class friend of the writer, attending the Belmont schools and later a private school in Boston. He entered Tech in September, 1870 with the Class of '74 and this was a prime cause of my considering the question of taking the course there. The following year found Simonds enrolled in the Class of '75 and he was connected with us for two years, and one year with '76, leaving the Institute in June, 1874, as a regular in mechanical engineering. For a year he was a clerk with George Dunbar & Co., dealers in railway supplies. He then went into a wool store, remaining until taken sick in August, 1876. During 1877 and 1878 he was a draughtsman in the city architect's office, Boston, and in 1879 he entered the wool business on his own account. For many years he was a member of the firm of H. & F. P. Simonds, wool dealers on Summer Street, Boston. In September, 1905, he married Mrs. Edith R. Durham of Belmont. For about forty years he had made his home in Lexington, Mass. He leaves a widow and a brother, F. P. Simonds.

1877

RICHARD A. HALE, *Secretary*, Essex Co., Lawrence, Mass.

The annual reunion of the Class of '77, M. I. T., was held February 21, 1922 at the Algonquin Club, Boston, with Charles A. Clarke, president of the Class, presiding as host of the meeting. There were fourteen members present: Robert D. Andrews of Andrews, Jones & Rantoul, architects, Boston; Francis H. Bacon, furniture designer and interior decorator, Boston; William H. Beeching of Little, Brown & Company, Cambridge; W. B. Bradford, assistant engineer at Charlestown Navy Yard; George W. Clapen, architect, Canton; Charles A. Clarke of Hill, Clarke & Company, machinery supplies, Boston; Warren E. Fairbanks, Caryville; Linus Faunce, engravers' supplies, Boston; B. C. Mudge, United Shoe Company, Beverly; Richard A. Hale, engineer of the Essex Company Lawrence; F. I. Sherman, civil engineer, Mansfield; H. C. Southworth, merchant, West Stoughton; B. T. Williston, American Injector Company, Boston.

Mr. Andrews who was the architect of the Massachusetts State House Extension presented his plan for the Memorial Arch, in connection with the proposed new Massachusetts Avenue bridge across the Charles River and explained the plan. An alternative plan proposed by others would necessitate a large island in the basin and detracting seriously from the general scheme of a large basin. Andrews' arch provides for a landing place for boats and would not detract from the general effect of the basin. A resolve was adopted approving Andrews' plans and remonstrating against any extended island. An outing during the summer at some one of the country clubs was discussed and the president and secretary were to make arrangements when the appropriate time came. Letters were read from members who were unable to attend.

1880

GEORGE H. BARTON, *Secretary*, 89 Trowbridge Street, Cambridge, Mass.

The secretary is very busy but promises to furnish details of his plans for a summer school from Niagara down the St. Lawrence to New Brunswick and Nova Scotia, for the next issue of the REVIEW.

The following interesting letter from Edwin E. Chase is a welcome addition to the Class notes: "George H. Barton, stand up and be cross-examined. Your interesting article in November TECHNOLOGY REVIEW is a slap at the other three survivors of '80, which cannot be overlooked any more than your neglect to call upon the undersigned when you passed through Denver. The Class of '80 was distinguished for quality, not quantity, for there were but eight sure nuff graduates in it and 50 per cent of them have passed on, so your allusions to dead ones now living must be directed to myself, Miller and Hamilton. You say you never hear from us, that you saw Miller awhile back but could get nothing of interest out of him, which shows you don't know how to tackle people. I saw Miller several years back, took a hot dog lunch with him at a short order stand and rooted for the Boston nine with him until we were hoarse. He unburdened himself to me in a way that would make fine reading, so the next time you see him I suggest you discuss Babe Ruth and not paleontology and you will get a good rise out of him. Your experience in Hawaii was most interesting, but I believe a trip I took to Texas for the Lanyon Zinc Co. sixteen years ago beats it for pithy and amusing events and I am going to inflict it upon you to settle my grouch for your neglect to call, or *did* you call and was I off in the hills? A new-fledged graduate hesitates to appear in print, fearing it will be taken for an attempt at self-boasting, but us fellers of '80 are now well seasoned and my narrative will be so long you cannot insert it in the TECHNOLOGY REVIEW, but if you like, you can read it to your drowsy class in rockology some day when the situation for keeping them awake looks desperate. It might also interest some young mining engineer who has the West in view, but for his comfort I will say that a present day trip is more likely to be in a high-powered Pierce Arrow rather than on the back of a wild cayuse.

LOOKING FOR A ZINC MINE

One would hardly look to Texas for a zinc mine, and right now an oil well would be more in order, but I didn't find any zinc mine, so the unexpected failed to happen. It was at the flag station of Knox that I was separated from my Pullman car, one hundred miles east of El Paso, at the uncanny hour of midnight. My first surprise was the station agent himself, one of those long, lank Texans, but, contrary to usual, adorned as to his head with a big wad of a gingham apron. The only express that got off with me was a huge bottle of chloroform, which aroused my curiosity, when combined with the freak nature of the only companion visible for miles. I asked him what show for a half night's sleep. He looked at the bottle, mumbled something and motioned me to follow him. Entering his shack I saw there was but one single bed, but he gave me a six by three spot on the floor, gave me also his pillow and turned in without saying his prayers. What could I do with that pillow? His swathed-up head had left several months' dent in it as well as grime. I feared the itch or something worse. I also feared to offend a lank Texan who is so quick on the draw. But, here is some good advice to the rising engineer, always take with you a clean sugar sack. It is handy for many purposes. I sat tight until I heard his first snore, then slipped his pillow into my sack and slept in peace. The next morning I found what the chloroform was for. It was not for me, nor was it bootleg, but medicine for some twenty head of horses all of whom had the most awful ring bone. My chances for a horse to the mine, ten miles away, looked dubious, but he assured me that if I was a *real* cowboy, capable of riding any kind of a bucking broncho, then he had one so called 'bronk' that I could have, but unless the saddle was second nature to me, then I better stay off. I was up against it, so had to make friends with the cayuse. Station man held his head while I finally swung my left foot into the stirrup. The right foot should by rights have been also swung into the other stirrup, but Sir Bronk was 100 feet on his way before that was accomplished and I reached the mine at the same speed the sun was travelling. (Charlie Cross, peace to his ashes, told us the miles per hour once, but I forget.) I found the shack where I was supposed to connect with the two men operating the mine, but no signs of life or smell of good old coffee, not even smoke from the stove pipe chimney. I pounded on the door, somewhat amazed at the sight of a Rocky Mountain burro close by, dead in the first degree, with his legs straight up. A faint hello, greeted my ears. I entered only to find two men in bed both seemingly awaiting the undertaker. On closer inspection I concluded myself the undertaker was not more than two yards away. After some time they were able to tell their troubles to wit: The night before, they concluded to make some biscuits for supper. Finding their baking powder was all out, one of them hiked a half mile to another desert rat to borrow some of him. Nobody home, so he looked for baking

powder, found some and went home to biscuits. One taste and they both looked at each other and asked, 'What's matter?' Both sick as dogs, but had presence of mind enough to take a big dose of mustard, throwing the biscuits aforesaid out the door, hence death of burro, for the baking powder was rat poison put into an empty baking powder can. One can die of druggists' wrong prescriptions in a civilized town or even so on the lonely desert. The mustard did the work however and the next day they were able to help me in sampling the zinc mine. That night, however, I failed to see much prospects of a good downy bed such as I was hoping for, but they said there was a big 'haunted house' a half mile down the gulch where I could get a bit of sleep, if I didn't mind strange noises, which no one had yet been able to account for.

A haunted house looked tame to me compared with the bucking bronco I had travelled with, so I began my lonely vigil in a good comfortable bed, but those noises were sure strange and I can only account for them by presuming they were a good bunch of rats. At just midnight, however, a noise broke forth that could not be mistaken. It was half a dozen gun shots, accompanied by the tramping of many horses followed by the door being flung open and many rough voices saying things that would not be fit to put in writing. 'Who in hell is in that bed?' was the first I could make out in the clang of many spurred feet and big hats. Most mysterious things however become trivial when understood and I found a bunch of cowboys had adopted this house as a good place to sleep when they could find the time. I therefore politely offered them my bed as being a first claim to same but with true cowboy Texas hospitality they said, 'Stay where you are pard,' and they rolled up on the floor. My horse had been turned loose to find his way home and I saw here the opportunity to strike a bargain with Mr. Cowboy for transportation back to the station a few nights hence and we closed the deal. My train left the flag station at 4 a.m. so a few nights later saw me and friend cowboy leaving haunted house at 2 a.m. loaded with samples, baggage, etc. Evidently Mr. Cowboy thought to have some fun with me and picked out for my comfort a pretty wild bronco. He (cowboy) took the lead down hill at a break neck speed and I tried to keep up to show him I also was a shining light at such sports. He forgot, however, there was a closed wire gate a few miles along the road, but his bronco found it all right and stopped so sudden that Mr. Cowboy came very near cashing in right then and there, as he went over the fence on to his head. Luckily I had not been able to keep quite up with him and pulled my horse to his haunches before it was too late. Mounting once more we started off again at high speed, but all at once a great change came over Mr. Cowboy. He twisted and writhed in his saddle and seemed to enjoy walking his horse. I asked him what his troubles were and he said cramps. Praise be Allah, says I to myself, perhaps you will act decent now, and he did. He also grew quite sociable, after finding he could not have the pleasure of seeing me ditched, and I asked him if he could tell me the mystery of the station agent and his tied-up head. He laughed and said, 'that feller's wife left him two years ago and he made a vow he would never cut his hair until she came back to him' (the joke of which I could not see). That his hair had grown so long he was compelled to cover it up with a gingham apron. How trivial are the mysteries of life when once explained. My first question naturally was, 'Is the train on time?' 'Three hours late,' was the reply of my Hindoo-looking friend — and I might have slept until morning, had I but known. Looked to me I might still snatch a little sleep if I could but locate a berth, so I prowled around and entered a stone boiler room where I found the 'makings' of a bed in an old discarded bedstead, occupied in years past by the engineer of the pumping tank, but it looked good to me in spite of the absence of any coverings and I was soon dead to the world, but was suddenly awakened by the most terrible ear-breaking noises and worse of all could not see where it came from but seemed like it was actually inside the boiler, which proved to be the case, a mechanic having dropped off the last train to repair a damaged boiler and just my luck to happen when I wanted to make up on short sleep. I finally boarded a belated train and got home without further mishaps except I was the sickest man any one ever saw that night outside of a storm at sea, due I suppose to drinking too much of Texas alkali water.

Now, Georgie boy, I feel I have got even with you if you have had the patience to read this through, but it is all true to exact facts, which makes me think Texas is a hoodoo state and better be sidetracked when looking for a mine, but, my! what hasn't it done in oil since that time? The incidents attending this Texas trip are not the common experiences of an engineer's life, but a peculiar combination of amusing events which happened for some reason to all be concentrated on this special trip. Ordinarily a mine investigation

is accompanied with all the luxuries of a Pullman and fine auto trip of recent years and the mine management cannot do enough for you if the mine is on a contemplated sale, until, of course, your report is rendered. Then, sometimes, you are not half the good fellow he thought you to be, but sometimes a good one turns up and everybody is happy. Now, brother Barton, if you ever go through Denver again without calling, you will get an octavo volume from me and doubtless a few telegrams sent 'collect,' so don't forget next time I reside at 1450 Williams Street and have an office at 207 Colorado National Bank Building and your presence would be most gladly welcomed at both places.—Signed, *Edwin E. Chase*, one of the survivors of '80.

P.S. My grouch is not so severe but that I sure wish you a most happy and prosperous A.D. 1922."

The Portland (Me.) *Express and Advertiser* has the following to say of Joseph Torrey, a member of our Class: "Hon. Joseph Torrey heads the non-partisan ticket in this city, which is expected to win by a large plurality on election day against the so-called Independent ticket headed by Mrs. Lois McKiever. He is the son of Francis B. and Eliza Amanda (Bowman) Torrey and was born in Richmond, October 5, 1859. He attended school in Bath and the Massachusetts Institute of Technology from which he was graduated in 1880, after which he went into business with his father in the Torrey Roller Bushing Works, known the world over as manufacturers of sheaves and brass-work. He was married, January 21, 1891, to Arletta Lindsey Spinney of Bath and they have four children. Mr. Torrey had always been an ardent Democrat, and has been a member of the common council and in 1898 was elected mayor by three votes over the late Walter G. Webber, the first Democratic mayor Bath had for many years previous to that time. He is a member of Polar Star Lodge of Masons."

1882

WALTER B. SNOW, *Secretary*, 60 High Street, Boston, Mass.

The fortieth anniversary dinner was held at the Engineers Club, Boston, on February 9 and considerable time given to discussion of plans for a celebration in the spring. Those present were Cheney, Darrow, French, Gooding, Jenkins, Herrick, Lewis, Munroe, H. F. Ross, J. H. Ross and Snow. Walker is in Europe but expects to return in May.

1883

HARVEY S. CHASE, *Secretary*, 84 State Street, Boston, Mass.

Harvey M. Mansfield's headquarters are now at Bartow, Florida, 150 Main Street. The secretary has been spending the winter in St. Petersburg, Florida, recuperating from overexertions of war time. Doing the "recupe" thoroughly too, gaining poise and avoirdupois! Golf, bowling-on-the-green (marl), swimming, fishing, etc., to say nothing of eating, sleeping, and living in the fresh air of all outdoors. Unique town! Everything possible done to entertain visitors, "tourists," men, women and children. Ideal climate, exceptional location, surrounded on three sides by warm waters, the Gulf and Tampa Bay. Advise all eighty-threes who need it or who can get away, to come here for winter. Pleasant rooms in private houses, reasonable rates; good food, fresh fish, vegetables and fruits galore. Don't restrict it to '83 either — *all* come! Getting to be quite a "Booster"! There are parts of Florida where I would not care to stay the winter, but this region is nearly perfect if one experience can determine it.

1884

H. W. TYLER, *Secretary*, M. I. T., Cambridge, Mass.

Members of the Class will hear with sadness of the death of O. R. Noble in Granville, Mass., September 6, of which the secretary has but recently learned.—From *The Herald*, Washington, D. C., March 6, 1922: "Dr. Frederick Haynes Newell, consulting engineer

with the National Reclamation Service, and for many years director of the service, celebrated his sixtieth birthday anniversary yesterday. Dr. Newell was placed in charge of the Reclamation Service at its inception, in 1902, by President Roosevelt. He resigned in 1915 to devote his attention to duties of a broader scope, although continuing to serve as consulting engineer. Dr. Newell is a native of Pennsylvania. He is a graduate of Massachusetts Institute of Technology."

The many friends of F. B. Richards will be glad to hear that he is now well on the road to recovery after a rather serious illness in the hospital from pneumonia.

1885

I. W. LITCHFIELD, *Secretary*, 10 Kenmore Street, Boston, Mass.

A letter received from Fred Newell during the holidays states that he is quite busy with consulting work and during the latter part of last year spent considerable time in Montana and Alberta on the division waters of St. Mary and Milk Rivers between the United States and Canada. Fred is very much interested in the American Association of Engineers, of which he is one of the organizers and in which he continues to take a great deal of interest. He writes: "My chief interest at present is in helping in the development of a national policy of reclamation of all waste lands and in creating, where practicable, opportunities for small self-supporting farm homes in all parts of the United States. In this the success of the Reclamation Service in the arid regions affords a most valuable example of what may be done elsewhere. The message of President Harding to Congress, on December 6, has greatly stimulated interest in this movement among public men. The Chamber of Commerce of the United States has designated a Committee on Waste Lands, of which I am a member, and to which I expect to give much time this winter."

Ed Dewson has given up active work in connection with the Westinghouse and Standard Air Brake Companies, of which he has been chief engineer for a long time, and is now acting in a consulting capacity. Although living at Quincy, Mass., his old home town, Ed runs on to New York once in a while to straighten things out, but finds interesting occupation at home most of the time.

Ev Morss has added to his other responsibilities the office of treasurer of the Institute, a place which he is particularly qualified to fill. At the recent meeting of the New York alumni, at the Hotel McAlpin, he gave an excellent picture of the financial and physical condition of the Institute. At the same dinner Arthur Little, president of the Alumni Association, made a most excellent address.

Arty Plaisted has developed a trait which none of us have suspected. He has become one of the most artistic designers of Christmas cards in the country, as shown by his own personal cards sent out during the holidays.

Every once in a while Sid Parsons turns up looking well and youthful and regretful that he does not get around to Class meetings.

At the alumni dinner in New York, previously referred to, there were seven '85 men present, being a larger proportion than that of any other Class. The annual reunion at the Wianno Club, Cape Cod, will probably be held the seventeenth, eighteenth and nineteenth of June. Last year there were about a dozen men present and we all had a most delightful time. Arrangements will be made at the Class dinner which will occur April 22.

Charles R. Allen is now connected with the Dunwoodie Institute of Minneapolis, Minn.

Charley Eaton has just returned from a trip around the world which has occupied just about a year. He remained in Haverhill for a week or two and then started for California. He expects to be back the middle of June and in time for the annual reunion at Wianno.

1887

EDWARD G. THOMAS, *Secretary*, Toledo Scale Co., Toledo, Ohio

Your secretary for ten years has been located so far from the center of distribution of the members of '87 that his efficiency as a class official and a news gatherer may be

stated "with a close approach to approximate exactness" to have been zero. Consequently being in New York just before the time of the annual dinner of the Alumni Association, it seemed to me a fine time to see a lot of the Class at once, renew acquaintance and swap stories. Well I attended the dinner, it was a good dinner, good speakers and a big gathering. The '87 marker was surrounded by plenty of *seats* and those which were used were occupied by the secretary, myself, E. G. Thomas, and the only member of the Class who lives in Toledo. You can imagine that there was great enjoyment in shaking hands and swapping stories. What's the matter with you fellows? Are you too decrepit to go out nights?

Mr. and Mrs. Giles Taintor have announced the marriage of their eldest daughter to Mr. Sylvester Thomas of Bloomfield, N. J.

Cameron and his wife and daughter are on their way to Honolulu for a vacation trip of several months.

A recent Bulletin of the Canadian Mining Institute contains a note to the effect that Archibald McColl, II, for a long time Secretary of the Nova Scotia Steel & Coal Co. has now been promoted to be General Manager of the Iron Works of this company at Trenton and Stellerton, N. S.

THIRTY-FIFTH ANNIVERSARY

Taintor, Bryant, Draper, Sears, Cameron and Crosby met at dinner recently to undertake arrangements for our next reunion and decided that the dates should be June 17 to 20 and that the place should be the Hotel Griswold, New London, Conn. The selected spot is most desirable, offering opportunities for sailing, bathing and all other sports and attractive accommodations in an excellent hotel. The committee will promptly send out notices so that you may plan to attend.

1888

WILLIAM G. SNOW, *Secretary*, 112 Water Street, Boston, Mass.

The Boston Transcript recently stated that Edwin S. Webster, president and director of Stone & Webster, Inc., and director of the American International Corporation, accompanied by George O. Muhlfeld, vice-president of Stone & Webster, and vice-president and director of the Latin-American Corporation, have arrived in Japan. Mr. Webster and Mr. Muhlfeld may visit China, as well as Japan, and are interested in looking into proposed large engineering works. They are interested in the construction of a large dam, rising two hundred feet above the present water level, on the Sho River not far from Aoshima, built for the Shogawa Hydro-Electric Company. About sixty thousand horse power is expected to be developed by this plant. Mr. and Mrs. Webster were guests in December last at a dinner given in Washington by Vice-President and Mrs. Coolidge in honor of President and Mrs. Harding.

The engagement of Miss Ella Wood, daughter of Mr. and Mrs. Fred J. Wood of Westbourne Terrace, Brookline, to Dr. Walter Gray, a Johns Hopkins and Illinois Wesleyan College man, has been announced.

Buttolph left early in March for a six to eight weeks trip to the Pacific Coast in connection with work for the Manufacturers Mutual Fire Insurance Co. of Providence, R. I., of which he is vice-president and engineer. He included in this trip a brief vacation with Mrs. Buttolph in Southern California.

The Boston Sunday Herald of January 22 states in connection with industrial waste: "Col. Sanford E. Thompson of Boston, speaking at Cleveland a few days ago, undertook to point out at least some possibilities of change for the better. He not only cited illustrations of waste in the building industry with which he was immediately concerned, but he brought forward also some examples not only of quicker work, but of better work. Union leaders say, sometimes in good faith, that they limit output to prevent poor workmanship. In like manner the manufacturer often feels that he cannot afford to use the piece work system because the workers, in order to turn out a large number of pieces and earn the correspondingly higher wage, will skimp their jobs and lower the quality of output. Says Colonel Thompson: 'Both the union men and the manufacturer are wrong.

Speed, unless carried to extreme, does not produce poor quality. We have found many cases where the fastest men were the best workmen.'

This careful student of industrial problems has reached the conviction that 'the thinking leaders of labor today really appreciate the necessity for eliminating restriction of output, although actions are not always in accord with this point of view.' He recites the long list of reforms in the methods of the building trades union that were demanded by Samuel Untermyer of the Lockwood committee and accepted by the unions. But with all these facts in mind, and out of a large experience, it is encouraging to find this Boston engineer taking the position that at least the 'thinking' leaders of labor see the fallacy of the course labor is pursuing.

Neither driving by the employer nor shirking by the employee gets the best results in industry. Colonel Thompson says that back in 1886 on his first job he heard the contractor with his foremen and engineers discussing the question whether successful results could be obtained from the laborers with a liberal and continuous use of profanity. But, hire today a typical foreman of the nineties and not a laborer would stay on the job."

Dr. Arthur B. Frizell's present address is 338 Harvard Street, Cambridge, Mass. He conducts classes at the Charlestown Navy Yard. He was one of the '88 men at the Alumni dinner in January.

Arthur T. Bradlee has been re-elected president of the William Whitman Company, Boston. This company owns a large majority interest in the following mill properties: Arcadia Mills, Katama Mills, Monomac Spinning Company, Mary Louise Mills, and a substantial minority interest in the Arlington Mills, Calhoun Mills, Manomet Mills, Nashawena Mills, and Nonquitt Spinning Company. It directs or actively assists in the management of these nine mills and is the exclusive selling agent for all of them.

"George L. Heath is now connected with the Michigan College of Mines, Houghton, Michigan."

1889

WALTER H. KILHAM, *Secretary*, 9 Park Street, Boston, Mass.

Frank L. Pierce died on January 23, 1922. He had been ill for some time. *The Boston Transcript* of the twenty-fourth contained the following:

"Frank L. Pierce, president and treasurer of the What Cheer and Hope Mutual Fire Insurance Companies, died after a long illness at his home, 169 Brown Street, Providence, R. I. Mr. Pierce was born in Worcester, on October 11, 1865, of old New England stock, a son of James Dwight and Marcia Hammond (Mack) Pierce. He moved with his parents to Springfield where he attended the public schools.

Mr. Pierce went to work in Holyoke for the eminent engineer, Clemens Herschel, in the Holyoke Machine Shop and assisted in water power work, and helping in many wheel tests. Mr. Herschel advised him to continue his studies and he entered the Massachusetts Institute of Technology in the class of 1889. During his summer vacations he worked for the Thorndike Company, at Thorndike, learning the cotton business. He had intended to follow textile work as a profession and made good preparation in this way. On leaving the Institute Mr. Pierce went first to New Brunswick, N. J., and then for a short time to the Illinois Steel Company in Chicago. There he gained technical knowledge, especially in chemistry, which proved of value in his after years.

In 1890 he took a position with the Mutual Fire Insurance Company in Boston and rose rapidly in the business. In 1900 he received an offer from the Chelsea Jute Mills of Brooklyn, N. Y., and spent about ten years with that company as agent, vice-president and general manager. He was eminently successful, greatly built up the company and went to Europe several times in its interest. He made a study of many improvements in the handling of 'soft fibres' and became one of the foremost men in the country in the manufacture of jute, flax and kindred material.

In 1909, Mr. Pierce was chosen to be president and treasurer of the What Cheer and Hope Mutual Fire Insurance Companies and brought to the business a thorough knowledge of conditions, a wide acquaintance and an enthusiasm for the work, under which the What Cheer and Hope companies have grown in strength and prestige.

Mr. Pierce was a trustee of Sigma Chi fraternity and belonged to the Alumni Association of the Massachusetts Institute of Technology. He was a member of the Old Colony

Club of New York, The Commercial Club and the East Side Skating Club, both of Providence, the Providence Art Club, The Players, the Rhode Island Country Club, the Rhode Island Historical Society, the Wannamoisett Country Club, and the Turks Head Club. He was a Unitarian in belief, and a member of the Unitarian Laymen's League. He was also a director of the Rhode Island Investment Company, of the Industrial Trust Company of the Chelsea Fibre Mills of Brooklyn, N. Y., and a member of the board of visitors of the Rhode Island State College. During the war he was a director of the fire prevention section of the War Industries Board at Washington, and served on the draft board in Providence.

Mr. Pierce married, in 1897, Miss Florence McKnight, daughter of John B. McKnight, of Springfield, who survives him.

In quick succession came Ashton's death on January 31. The following account of his life is from the *Boston Globe* of February 2:

"Albert C. Ashton of 33 Columbus Avenue, Somerville, a former member of the Somerville School Board and for over twenty years treasurer of the Ashton Valve Company at 161 First Street, Cambridge, died from hardening of the arteries at 11.30 Tuesday night at St. Petersburg, Fla., where he had been since November 17, 1921.

He was born in England fifty-two years ago, the son of Mrs. E. C. Ashton of 2 Bigelow Street, Somerville, and the late Henry G. Ashton, founder of the Ashton Valve Company. He was reared in Somerville and graduated from the Chauncey Hall School, Boston, and Massachusetts Institute of Technology, where he took the engineering course.

Mr. Ashton had been an active member of the First Methodist Episcopal Church, Somerville, which he served as a member of the Board of Trustees, Sunday school chorister and had been assistant superintendent of the Sunday school. He was a past master of John Abbot Lodge of Masons and was also a member of Somerville Royal Arch Chapter, Orient Council, Boston Commandery, K. T., Mystic Shrine, Massachusetts Charitable Mechanics Association and American Society of Mechanical Engineers, of which he was at one time chairman of the Boston section.

He is survived by his wife and four children, Henry C., Robert L., David John and Helen R. Ashton, and four brothers, Harry H. Ashton, of Somerville; Fred H. and Carl F. Ashton, of West Medford, and Frank G. Ashton, of Wayland, and a sister, Mrs. Elsie G. Richardson of Somerville."

At the Secretary's request, Dunphe prepared for the Archives of the Class an account of his recent sea voyages which are so entertaining that we reproduce them herewith in full and the Secretary asks the world if it does not agree with him that Dunphe should be called the "Masefield of '89." Dunphe was extremely modest about this and it took six or eight months to extract the material from him.

An article by Orrok on the "Present State of Knowledge of the Properties of Steam," accompanied by a lifelike portrait, recently appeared in *Mechanical Engineering*. The value of this article is apparent to the secretary but it is a little too technical for him to undertake an abstract.

LETTER FROM C. S. DUNPHE

AN INTERESTING ACCOUNT OF A TRIP TO THE BALTIC PORTS

I can hardly realize that it lacks only a month to complete the anniversary of my retirement, for physical disability, from the New York City Street Cleaning Department after a continuous service of twenty-six years, for Cal. Waring appointed me on the twenty-fourth of January, 1895, and I was retired on January 31, 1921. My doctor gave me rigid instructions saying if they were not carried out the result would be that I would probably have to submit to an operation. I detest cold steel applied even with the induced somnolence caused by an anæsthetic so you may believe that I didn't take any chances and faithfully followed instructions as to diet, pills, tablets *und so weiter*, now that the German peace has been concluded and I may be allowed to use the phrase. My constantly reiterated question propounded to the good doctor was, "Doctor, would it be all right for me to take a good trip on some vessel?" Finally the desired consent was given and it was then up to me to see if I could find a freighter of which I might become a member of the crew at so much per month, for I was not then and am not now sufficiently funded to go on a Cook's Tour, as far as Bayonne, N. J. I have always had a great desire to cross the line, see the Southern Cross, Buenos Aires, Rio and some other places but this trip was denied me but in a short time I had my citizen seaman's passport and, on April 25,

I became mess boy for the sailors and firemen on the American freighter *Waco* and on the twenty-ninth we signed on for a trip to Baltic ports.

We sailed at 6 p.m. the night of April 30, just clearing the marine strike. When I look back and think of all the stores I toted from the dock to the ship, of the 2,800 pounds of beef that another man and myself unloaded from the truck and placed in cargo nets for hoisting aboard, I am really surprised at the strength I had, for such work was farthest from the doctor's suggestion. About an hour before we sailed I found a chance to telephone my wife, from the docks where the ship lay, and I am free to confess that my heart strings gave some twitches when I said, "Good bye," and hung up the receiver and there was another little reaction when I saw the last line cast off and I was surely off on my great adventure.

It had been 31 years since I had crossed the Atlantic, at which time I had an opportunity to see something of England, Holland, Belgium and France. This new venture was to take me to Baltic and Gulf of Finland ports and I was very glad, for the route was to be pretty well out of the usual tourist track.

The first two days out were very rough and blowy, the official log of the ship reading for the two days, "Shipping seas fore and aft. Laboring heavily." If you had only been at the outside passageway door to the saloon at a certain time on our first day out you would, no doubt, have laughed at me, even as did the P. O. mess, when the ship lurched and my feet went out from under me on the wet deck and down I went and the bread, butter and dry coffee I carried went each in a different direction. The only thing to do was to get on my feet and salvage what I could and then ask the Boston Wildcat, the nickname for the P. O. mess, what he was laughing at or rather why he was laughing. He said he simply could not desist and I said, "I guess you couldn't, Harry."

It was interesting to watch the green water come over the rails as the ship would roll from one side to the other; the rails were often covered with solid water for a length of thirty feet. Fortunately I was not at all seasick and got solace from my briar pipe and fashion tobacco of which I had taken care to provide a little supply. As mess boy I had to be out at 6 a.m. and was busy until about 11 a.m. and by 11.15 I had to set up my mess tables for an 11.30 dinner for men going on watch. After the dinner dishes were disposed of I could rest until 4 p.m. when I had to get supper ready for 4.30 and then after the supper dishes were out of the way I had the rest of the night to myself and I generally went on the fo'c'sle head or the boat deck for a smoke and from there to the deck engineers' room to write up my private log and do an instalment on the first letter I would have ready to mail to my wife and family. By the time we had reached the Kiel Canal this letter was 33 pages of letter size paper. Luckily I had a good supply of thin typewriter paper for on many occasions some of the boys would come to me and ask if I could spare a sheet or two and an envelope. Of all the letters I wrote, and I had 31 stamped and addressed envelopes in my portfolio at one time in Kotka, Finland, I believe not one went astray.

The seventeenth of May, Bishops' Rock was sighted early in the morning and then followed the usual channel panorama, the Lizard, Eddystone Light, Beachy Head, where we took on our pilot for the Elbe River, Dover, etc. Of course we were a couple of miles from the English coast but things looked quite natural to me, the most noticeable change since my last visit being a new coat of paint on the Eddystone light tower. Of course I may have been wrong as to that but certainly I was right on St. Catherine's revolving light on the Isle of Wight. We passed this light about one o'clock in the morning and I thoroughly enjoyed a man's size jelly sandwich as I watched stately revolutions of the beams of light about the entire horizon. I might say here that the saloon mess had been ill for several days at this time and I had been put in his place. I make this digression to let you know that as acting saloon mess I had the pantry keys and was entitled to the jelly sandwich and other delicacies which were not what one would call "prevalent" with me when I was in my natural habitat aft.

The weather up channel was beautiful and the Dover Cliffs shone with their chalky whiteness. From there we shaped our course across the North Sea, where by the way I observed one of the most gorgeous sunsets I have seen, and let me tell you, I have seen a lot more sunsets than I have sunrises. We were off Cukhaven about 4.30 one clear morning and I recall that the dense black smoke from our fires blew from the funnel its full size over the town and close to the water keeping its shape, looking for all the world like an ostrich feather boa that had perchance blown from the neck of some super-Brobdingnagian lady. We went from the Elbe River into Kiel Canal one morning at 6 o'clock and had a

delightful day for our trip through. For some kilometers the canal leads through beautiful level fields with foot hills in the distance on either side. After passing through these fields the banks gain height and are all beautifully green and well wooded. The cottages that were scattered along the banks were in many instances nestled in the trees and the red tiled roofs and cream-colored brick walls showed to good advantage among the green leaves.

By 6 p.m. we were at the Haltenan end of the canal and tied up for the night to take on water, that is the ship had to take it but of course the men could go stronger and most of them took the 20-minute trolley ride to Kiel, fare 2 cents American money. I went over myself and got back to the ship before eleven o'clock without any casualties. I was the first man back and the others followed *ad lib* in what were apparently different stages of consumption (of Cognac). Some of the men only went up to the head of the hill a short way from the ship and there they found all that their hearts desired and their money could purchase. One young wiper did not get over 4 blocks from the ship but the drinks, etc., cost him \$5 and some one took \$70 from his pocket. He could not have had a more expensive trip had he gone to Kiel, for it was all the money he had. When I questioned him about it the next day he said in good English, "Well, Pop, it is so much that I can't spend for booze."

The men finally showing up by 6 a.m. we were off on our way to the Danish port of Svendborg on Fyen Island. A day's run brought us here and we docked at a little grain elevator that was to take a few hundred tons of our bulk corn. The town is old and here I found the brig *Hvalfiken* (Whalefish) that was built 119 years ago in Copenhagen for trade with Greenland and she has been making three or four trips a year. Christiansminde Park, lying on Svendborg Sound, is a most attractive spot and on a beautiful moonlight night with the orchestra in full swing, even if they were in high silk hats and shirt sleeves, the effect was most charming to both eye and ear.

In a week we were off for Copenhagen, a beautiful city, where I could take my kodak and have trolley rides at a ridiculously small fare. A feature on *Linie 3* was a double-decked trolley car and I went on this car several times. Ford's peace ship, *Oscar II*, was in the same slip with us in Copenhagen and I have a very good snapshot of her that I got from the fo'c'sle head of our vessel. The Copenhagen elevator took out a large quantity of grain in a day so our stay here was comparatively short and we went on to Danzig Free State where the saloon mess and a wiper were left and it looked, up to a few minutes before we backed out, as though we would have to go to Reval short-handed, as follows: the saloon mess, a wiper, a water tender, two sailors and the P. O. mess. Just as the Jacob's ladder was to be hauled over the rail the P. O. mess (Boston Wildcat) hove in sight and came up the ladder but the two sailors ("Pickles" and "Rock") and the water tender had to come up the steep angle of the forward hawser *a la* monkey. Some of the men forward reached over and grabbed the latter for he was pretty well fagged with the climb he had been forced to take. About an hour before we left Danzig a young American chap from Toledo, Ohio, came on board looking for a job. The captain gave him the job of saloon mess man. Abe was absolutely without impedimenta at this time, although he had a suitcase at Zuppert, a watering place near Danzig, a trunk at Konigsberg, where he had been rooming and dining for one American dollar a day, and a bag and money in Paris. By making a hurried trip ashore he got a few necessary things at slight expense.

After the men had come on board the hawsers were hauled in and we steamed for Reval, a very old town in Esthonia. At 3 a.m. on June 4, the second officer sent a sailor to rouse me out. The reason was a glorious sunrise and ahead of us in the distance was the old town of Memel. About here our course was changed to a run up through the Russian mine fields. We remained in Reval a couple of days discharging some of our bags of flour. I got some excellent views of the town from our flying bridge and had a chance to walk about the town. A permit was needed here to take a camera out of the dock gate. In this place the Soviet government forwarded a batch of my letters making no charge for the stamps. In Reval our dollar was worth 350 marks and the captain of a fair-sized German ship, that lay the other side of the dock, was paid at the rate of 40 American dollars a month. This seemed a small amount but think of the number of marks he would get. A short while back I had had some verbal trouble with a couple of the sailors who now that they could get liquor were inclined to be ugly when they were 10 to 100 per cent shot. I kept pretty well on my guard at meal times and was at all times contiguous to a large machine bolt, with nut, that just fitted my hand. In fact one might almost think that Providence had put it in my way. However it did not become necessary to use it,

for fortunately there was no attempt to do me any bodily harm although it was threatened a few times.

When we were up to the Riga lightship Abe and I took my camera on the fo'c'sle head and snapped each other with great success. Viborga, Finnish town, 60 miles from Petrograd, was our next stop. This old town is 60° 30' North Latitude and 28° 45' East Longitude and we were so far north that I was able to read letters on the boat deck by the twilight at 12.30 in the morning. I never expect to be nearer the midnight sun than I was in this place. Viborg is an interesting place with old fortifications commanding the approach across the bay from Trengsund which is a small town given over to great lumber interests. There are no docks in Trengsund for loading ships so the vessels are moored in the stream and loaded from lighters. Before we got away from Viborg I went on a trolley to Kalikkoinmakki and found here a lot of cellars and a few chimneys standing. The buildings had been destroyed a few years ago when the Red and White guard had a serious fight. The day we left Viborg was a red letter one for your little mess boy classmate for he was promoted to saloon mess man. Abe had left the ship after he had gotten his forenoon work done. I strongly suspect that he tried to get to Petrograd, for he told me that he greatly desired to go there.

Although the work in the saloon was harder, the change was quite to my liking and I got along very comfortably for the rest of the trip. Dinner was my *bête noir* for there was seemingly no end of dishes and silverware, but there was a water pipe and a steam pipe in the pantry sink with draining boards alongside, so I had everything handy. The steam coffee and water urns and steam table with pans and boat legs were in the same small room, so you may easily imagine that it was warm at times. My promotion carried with it an increase in pay of five dollars per month which was very acceptable. I have forgotten to mention the fact that I was the oldest man in the ship with one exception. The first assistant engineer beat me by two years. I was called "Pop" before we left home and soon that was changed to "Dad" and in truth most of the crew were young fellows about twenty-five years old. The wiper who got rid of his seventy-five dollars so easily the night we lay in the canal was the youngest of the lot.

The balneal equipment of the ship consisted of a toilet room with an open steam pipe with shut-off valve, galvanized pails and carry your own water from the top down on the after well deck. When you consider the relation of the formula π square to the diameter of a galvanized iron pail you will at once perceive the obviousness, for the greater length of time needed for a bath by a man of six feet when compared with a man of less feet.

We have now come to Kotka, a place of ten thousand inhabitants. The industry is manufacture of paper and paper pulp. We lay at the only decent dock and took on part of our cargo of paper and pulp. There were steamers and an assortment of sailing vessels moored in the stream and each one had a half shed barge alongside which was loaded with paper. The bales were hoisted out by the ship's winches. One day while we were lying in Kotka, I was looking over the off shore side of the ship, watching the laborers hook the bales on the whip, when one of them assayed to come up our Jacob's ladder just before he was to swing for dinner. He had come up a few steps when his feet slipped off the ladder and he went down under water like a veritable plummet and came up like a Kapoe motorboat cushion. He was pulled on board the barge and I think there was talk of docking him for the time he was absent from duty. The last of our corn and flour had been left in Viborg and, Kotka having furnished only a part of our return cargo, we proceeded to Helsingfors, the capital of Finland, to complete our load. We were off the entrance to Helsingfors about 1.30 in the morning and I was on deck to see the place. In fact I was on deck at all hours of the night and the men seeing me would ask, "Dad, don't you ever sleep?" As we entered the narrow entrance the sky was a silvery white and the low-lying shore with the trees was in silhouette against the sky. It had the effect of making everything appear in miniature. Directly across the Gulf of Finland we could see the steady white light of the beacon at Reval, which we were told had an elevation of 283 feet. Helsingfors I found to be a beautiful city with good pavements kept clean, trolley cars with women conductors and women longshoremen. (Pardon the paradox.) Regarding these women I will say that even a fleeting glance divulged the fact that they were mostly of husky stature and they did not seem, during working hours at least, to be given to roughhouse tactics but comported themselves in a proper and decorous manner. After all is said and done you know a lady is always a lady no matter whether she is bedight with high-grade Kohinoors or only clad in the more inexpensive seal-skin. We

lay near the end of the Sandvicken trolley line, so I always was able to find my way back to the ship.

I had left home with only one roll of film for my camera, but had no difficulty in getting Eastman films and at only a slight advance over the home cost. In one of the Helsingfors hardware shops, that of Julius Talberg, I saw a display of Yale & Towne door checks and locks that would shame the display in many a shop at home. Helsingfors had a beautiful wide esplanade with an open house that has been transformed into a cafe at one end and a beautiful bronze at the other. The restaurant had an upper deck with dining tables and diners could look down on the promenaders and listen to the music discoursed by the naval band that played in a hooded bandstand facing the cafe. I heard the band give several concerts, but concluded that I could not even risk cognac and coffee in the restaurant with only 10 Finn marks in my reserve sack. I had nearly gotten in bad in Danzig one night in a cafe there, thinking from the prices that I was playing safe. I was, however, pretty near wiped out for the charge was 24 marks and I had one mark left to get out to Broesen, a 40-minute trolley ride to where the ship lay. Luckily the one mark (two cents, a little less actually) was sufficient to pay my fare. An English turret ship, the *Carryvale*, came alongside while we lay in Helsingfors. Her construction was peculiar, a cross section somewhat resembling the ace of spades only the 'stem' was not so contracted. The two reasons advanced for the construction were that she was able to cut down tonnage dues in the Suez Canal and that when used to carry grain she would trim herself, but it was not a very satisfactory kind of ship and a number of them had foundered. We made the run from Helsingfors to the Kiel Canal in three days and had a fine day for our run through that excellent waterway. We passed a number of ships bound for Baltic ports. One was the small steamship *Zero* of Hull and she had a deck load of horses; another was the large motor ship *Indienne* of Copenhagen. She was a fine looking ship, but it seemed strange to see no funnel steam or smoke. We also saw several large tows of barges, schooners and ketches, and once I saw a small red deer on the canal bank. By 9 p.m. on June 25 we were out of the canal and gradually sunk the twinkling lights of Brunsbützel and were fairly on our homeward-bound journey. I had seen the Helgoland light on the trip over but it was a dark night and nothing could be seen of the island and I was rather disappointed, but now on the return trip, my desire was to be gratified by means of a bizarre happening. I was soundly sleeping in my bunk when at 3 o'clock on the morning of June 26, I was suddenly and brutally attacked by a member of the family *cimex lectulorius*. In certain places this family is legion. Well to make a long story short I sought and found the aggressor and I remember that his blood was literally on my head. Owing to a sort of induced sympathetic irritation on various parts of my anatomy I could not get asleep, so I put on my clothes and went on deck at that hour for the quieting effect of a draw on my pipe and there, astern a couple of miles over the starboard quarter, with the first blush of dawn behind it, was the block-like shape of Helgoland. I know I shall always feel somewhat grateful to that particular insect although he did meet condign punishment.

Brest was the place where we were to replenish our tanks by taking on about a thousand gallons of fuel oil, so our course took us well over the French coast. Not long after a large biplane, evidently bound from Dover to Calais, passed over the vessel at a low altitude and a carrier pigeon wearing a tag with R 34 on it lighted near No. 3 hatch and was easily caught. It was kept in a coop for a few hours and was then liberated. The weather was not very good as we worked along the coast line of Brittany, but it cleared up a bit when we were off Usharx, but when we went in to Brest harbor at 6 p.m., June 28, there was considerable haze which later on turned into a fine rain. On our way in we passed the Cunarder *Mauretania*. On account of the English coal strike she was coaling up in Brest. Our pilot took the ship in behind the breakwater and placed us alongside a 10,000 ton tanker that had been lying at anchor for six weeks for the purpose of replenishing the tanks of American oil-burning ships. It was dark when reducers had been found and connection made for the transfusion of the oil. The tanker set her pumps going at 40 pounds pressure per square inch. Of course the crews garnered over the rails. I remember a fat man came to the tanker's rail, eating a cold fried fish, saying, "It's a shame to catch them little mackerel" and then he would go to the mess room and get another from the night lunch. One chap called out to me to know my capacity. When I told him he said, "I thought you was next to the captain" and I replied that I was at meal times. Our steward had gone ashore in a small boat to get supplies and during his absence the captain asked me to

go on board the tanker and see if her steward could spare us any fresh vegetables. I found the steward to be a pleasant young man and he was able to spare us two bags of small potatoes, a bag of small carrots and another of turnips and two dozen heads of lettuce. He also gave me a good-sized wedge of Roguefort cheese which I was able to smuggle into my pantry. Later on I let some of the officers have part of it. The shipping board man came aboard from the tanker and signed our requisition for the vegetables and then I made a couple of store cheese sandwiches with coffee on the side for him and the captain.

About this time it was nearly 11 p.m., I went on deck and smelling something very like burning brimstone and seeing something akin to a lurid light I looked for the cause. It was the tanker's chief mate talking with some one on our ship regarding his estimate of one of our engine room force who had shut the valve on the oil pipe with the pressure stated before. The consequences were dire, for the large canvas supply hose had burst on the tanker's after well deck and before the pumps could be shut down ten barrels of perfectly good, sticky fuel oil had spurted all over her deck and half way up her main mast. I believe the mate was justified in his expressed opinion, for before the occurrence the big vessel had been immaculate. We left Brest at 6 o'clock the next morning bound for Philadelphia to discharge our cargo. We were about half way home with no fresh vegetables in the lazarette and some other things getting scarcer, when the captain came in for his breakfast later than usual. I served him, he rated the best there was, and he looked up at me and said, "Dunphe! I don't care for this food, I am just forcing it down." I knew I ought to be sympathetic, so in the most cheerful tone I could muster I said, "How would you like a nice cold canteloupe?" He said nothing, but looked at me with a sidewise glance. As we were crossing the banks we saw a large French barkentine at anchor with her dories around her. They were salting the fish as they were caught and would probably stay on Banks until September. One foggy morning we had a narrow escape as suddenly a large schooner, at anchor, loomed up almost in our course. The sea water on the night of July 6 was down to 34 and the atmosphere at 40 and 41 and at 8.15 p.m., July 7, we passed a moderate-sized iceberg, distant about a mile and a half, near enough to be able to appreciate what it would be capable of doing.

We had some boiler tube trouble on the way home that caused some delay, but the thirteenth of July we came up with Five Fathom lightship and then made a sharp turn to starboard to lay our course for Delaware Breakwater. About nine o'clock that night we took on our last pilot and were in due time tied up at the dock in Philadelphia. The last time I was in this city was in 1888 on my way home from a trip to Baltimore in a barkentine loaded with ice. After my dinner dishes were done I went ashore and telephoned a friend who had not long before gone over there to live. Later in the evening I called on him and we spent a couple of hours pleasantly and then I returned to the ship after I had called my wife on the long distance telephone. She had kept track of the vessel and knew I was due, so she was not greatly surprised to hear my voice. The next afternoon we were paid off and I reached home that night about ten o'clock. So I completed a trip that had taken me some 9,000 miles, to eight ports new to me, in the Baltic and on the Gulf of Finland. I had seen the coast of England, France, Holland, Belgium, Germany, Denmark, Sweden, Poland, Esthonia, Russia and Finland. Incidentally I had gained seventeen pounds in the ten weeks I was away and really had started to "come back." Should you hear of any *de luxe* trips advise me and I'll try to connect.

1890

GEORGE L. GILMORE, *Secretary*, Lexington, Mass.

Henry Plympton Spaulding has now located his studio at 384a Boylston Street, in the Allen Hall Building, Boston, where he has his exhibitions of paintings in water color and oil, and also is giving lessons in painting — visitors being welcome on Tuesday and Friday mornings from ten until one o'clock.

Charles Hayden was a guest at the farewell dinner to the Right and Honorable Arthur James Balfour and Lord and Lady Lee of Fareban by Mr. and Mrs. Cornelius Vanderbilt, at their home in New York on February 6, the night before they sailed for England. About two hundred guests were present and dinner was followed by a *Bal poudre* to which a thousand invitations were issued.

A letter received by your secretary recently from Fred Metcalf of Cleveland, Ohio, advises that on February 1, he and Mrs. Metcalf were leaving for a few weeks in Jamaica, "to try and stew the lingering bronchitis out of Mrs. Metcalf's lungs," as he expressed it. Last summer he was on the Pacific Coast, fishing and camping, with his brother. They motored from Campbells River on Vancouver Island down to Los Angeles. While there he saw Arthur Wilson at Watsonville where he is running a granite quarry and reports that Arthur is taking his recreation on his yacht which he keeps in Berkeley. Arthur also has a son in Tech, who is taller than his six-foot-several-inch father, but weighs easily one hundred pounds less. Fred also met Burdett Moody in Los Angeles. Burdett is business agent for the municipal water power development, getting new industries into the city, and really a man size job.

Popular science lectures for adults were inaugurated at Technology January 22, before a mixed audience of six hundred, which completely filled Eastman Hall. The lecturer was Prof. Harry M. Goodwin, Ph.D., head of the department of electrochemistry, and his subject was "Light Visible and Invisible."

Professor Goodwin seemed well qualified for the task of making abstruse science intelligible to average people. Although he is ranked high for his scientific attainments he is known at Technology for the simplicity of his explanations. One illustration he gives to make clear the phenomena of ionic migration, by which all positive ions go in one direction and all negative ions in another, is as follows: "It is as if in a crowded place, with men and women going in all directions, someone were to announce a bargain sale on one side and free beer on the other."

There was a formidable array of scientific paraphernalia laid out on the long laboratory tables in the lecture room. Several projection lanterns, arc lights, mercury arcs, flasks, chemicals and gaudy colored cloths lay around in seeming confusion, but Professor Goodwin used each one to illustrate some point in the theory of light.

The audience was very attentive—more attentive than is usual in the regular Tech lectures in Eastman Hall, and even when the lights were turned completely out no one left the hall surreptitiously by the back door, as frequently happens during the student lectures, after the attendance is taken. Many of those in the audience appeared to be teachers, and took copious notes on the different experiments.

The field covered was very extensive, touching at one moment the possibilities for studying internal stresses in steel, and at the next an arrangement for producing convincing "spook" effects. Some of the apparatus used was priceless and irreplaceable, such as an Iceland spar crystal used to polarize light, and immediately afterward an old worn shoe, which has been in the department for years, was used to illustrate fluorescence.

The audience was at one moment thrilled by the beautiful and weird effects of fluorescent substances viewed in invisible light—light which may not be seen by the eye—and at the next amused by the antics of a soap bubble pinned in the electric arc.

Professor Goodwin started with a short explanation of the nature of light which he said is composed of very minute waves. Beginning with the statement that ordinary white light may be split up into its components—red, green and blue-violet light, each one of which has a different wave length—Professor Goodwin explained how light may be added and subtracted, to explain color phenomena met with in everyday life.

Some of the most interesting of the experiments were those with invisible light—ultra violet. A black glass, which kept in all visible light, was placed over a searchlight, and in the rays of the invisible light Professor Goodwin placed chemicals which transformed the light in such a way that it became visible, in delicate and beautiful colors. This phenomena is called fluorescence, and Professor Goodwin pointed out that it could be used in obvious ways to make fake spirit visions.

This phenomena, according to Professor Goodwin, was the principle used in the signaling in No-Man's Land during the war. At the time it was announced that American soldiers were using a signaling device which could not be detected by the Germans, but of course it was not explained. Dr. Goodwin said that the signals were flashed with invisible light, while American officers on the receiving end had field glasses specially constructed with chemicals in the lenses which glowed in the rays of the invisible light.

Dr. George E. Hale, director of the Mount Wilson Observatory, Pasadena, Calif., has been chosen as the American representative to the International Research Council at Brussels. Dr. Hale has the distinction of carrying the position as a celebrated astronomer in America and one of the world's greatest solar and stellar investigators. His preliminary

training in physics and astronomy at Technology, at the Harvard Astronomical Observatory and at the University at Berlin qualified him for a professorship of astro-physics which included the directorship of the famous Yerkes Observatory. Few men in the United States have had so many honors conferred upon them by European and American scientific societies as Dr. Hale.

Edward A. Clark, an authority on gold-mining, died at his home on Commonwealth Avenue, Boston, March 7, 1922, from a severe attack of bronchitis. Mr. Clark was fifty-six years old at the time of his death.

Mr. Clark had been prominently identified with many mining corporations, both in Boston and in the West. He had reorganized many concerns, the latest being the Carson Hill Gold Mines Company. He was a member of the Algonquin Club, the Country and Automobile Clubs, besides a number of local and national scientific organizations.

Charles Hayden is required, under an Interstate Commerce Commission order issued today, to choose within thirty days whether he shall remain as chairman of the board of the Chicago, Rock Island & Pacific Railway or as chairman of the directors of the Minneapolis & St. Louis Railroad. Mr. Hayden was given permission to hold a number of places on the boards of directors of different railroads, but the commission held that it would not be compatible with public interest for him to remain as a chief executive officer of the two roads named, which, in part, are competing organizations.

Prof. William Z. Ripley of Harvard was one of the speakers at the discussion on "The Consolidation of New England Railroads," held at the Parker House by the Boston Chamber of Commerce on January 20. Ripley in his remarks stated "that New England's railroads should not be absorbed by the larger trunk lines of the country, but that they should be consolidated and allowed to stand on their own feet. He pointed out that if the lines were absorbed New England shippers of freight would lose a degree of independence in shipping goods. Now there are a half dozen points of egress from this section, and any one can be used, but if the lines are absorbed, points of egress will be strictly limited and New England's vaunted independence lost."

Allen H. Rogers, in January, was elected president of the Mining and Metallurgical Society of America.

Very sorry to report that Edward Bragg, whose home is at Trowbridge Street, Cambridge, Mass., has been an invalid for a long time, but he is one of the best optimistic type; and would be glad to see any of the Class who would drop in on him at any occasion.

The death was reported in January of Albert C. Ashton, at St. Petersburg, Fla. Ashton entered Tech with the Class of '89, and connected himself with them, but had several courses with our class.—Mr. Louis Schmidt, died November 29, 1921.—Edward T. Simpson, of Lowell, Mass., died August 18, 1921.

We regret to report the death of Arthur Whittier Ayer on December 4, 1921. Arthur or "Jerry," as he was known to many of us, entered with '89, but was obliged through illness to drop out, and then entered our Class. Arthur will be remembered, however, as one of the crack amateur baseball catchers of that time, and played on the famous "Tech Nine" in '86. He was prominent on the old Beacon team, and also played at Lexington with your secretary.

We have been advised by Mrs. F. C. Moody, that Frederick is insane, and that no further notices should be sent to him. We are certainly most sorry to hear of this, as Fred was one of the quiet kind that we always thought took things easy and without worry.

At the annual meeting of the Manufacturers Textile Association at Worcester, January 30, Spaulding Bartlett was elected first vice-president. Spaulding is the head of the S. Slater & Sons, Inc., textile mill people.—John Batchelder, with his son-in-law, leaving the ladies at home, started the middle of January and took a few weeks' trip to Jamaica, where he reports having a most delightful time, and certainly shows the good effects of an outing and getting away from business.

At the Alumni Dinner on January 7 at the Walker Memorial Building, the following were present from the Class of '90:

Burley, DeWolfe, Gilmore, Packard, Rogers, Roots and Tilson.

It was regretted that more were not present, but the "faithful seven" were only too glad to get together again, and are looking forward to our Thirty-fifth Reunion in 1925.

The following changes of address have been noted:

Elton D. Walker is now at 248 South Burrowes Street, State College, Pa.; Edward A. Northey, who was with us during our Freshman year, P. O. Box 2613, Boston, Mass.;

Burdett Moody, P. O. Box 497, Los Angeles, Calif.; Edward C. Burnham, 1 Northrop Street, Hopedale, Mass.

1891

HENRY A. FISKE, *Secretary*, 260 West Exchange Street, Providence, R. I.

Mr. W. H. Bassett has been made a director of the American Institute of Mining and Metallurgical Engineers.

Prof. William Henry Lawrence of the Massachusetts Institute of Technology's department of architectural engineering has been appointed curator of the Lowell Institute to fill the vacancy caused by the sudden death of Prof. William T. Sedgwick, last year.

1892

JOHN W. HALL, *Secretary*, 8 Hillside Street, Boston, Mass.

The responses to the January circular letter concerning the reunion indicate a good attendance. Another letter giving definite plans should have reached all members of the Class whose addresses we have, before this number of the REVIEW is published, and if you have not received such a letter let me know as soon as possible.

Here are a few extracts from letters recently received. Albert Matthews says he has been working out a new theory of the nature of disease and its natural cure and this enables him to escape boredom for the present. He writes from the University of Cincinnati.—Frederick H. Meserve who is a successful business man in New York has made a collection of photographs and other data in regard to Lincoln, which is the greatest collection of its kind in the country and the *New York Times* had a long account of the collection in a recent issue. He looks just the same as when he was at Tech and managing the business end of *Technique*.—Richard Waterman is secretary of the committee on railroads of the United States Chamber of Commerce in Washington.—McCaw is general manager of the Procter & Gamble Co. and up to his ears in big schemes all the time. He looks a bit older but has changed very little.

Arthur G. Pierce writes from Pittsburgh, "I see Henry Shute from time to time, he is vice-president of the Westinghouse Electric and Manufacturing Co. Once in a while I meet Sumner Ely on the street. I won't tell you about myself. There is nothing spectacular to tell."

Pollard writes from St. Paul, "Goodell is looking for better business in 1922. He is a loyal Tech man and his office wears a well framed picture of '92's graduating Class. He is interested to see classmen and to have them recall the fellows of the photograph. Frank Yoerg is said to have married within recent years. I do not see him but read or am told of an occasional civic move, the latest known to me was filing for Mayoralty nomination in May primaries. Leo Goodkind is with Mannheimer Bros. Chute in Minneapolis is busy encouraging realty improvements and transfers, encouraging agriculture and art—Fine Art."

Ralph Sweetser writes from Columbus, Ohio, and the list of his interests indicates that there is little that happens in the iron and steel business in that section that he does not in some way have a hand in.

Besides figuring in the actual work of teaching the young idea as '92 does with Johnston, Park, Fuller and Derr on the Faculty, are you aware of what influence our Class has otherwise, with Harry Carlson a Life Member, and Leonard Metcalf and Elisha Lee Term Members of the Corporation, and Metcalf and Carlson Alumni Council Members?

Remember the reunion and talk it up with everybody you meet whether he is interested or not.

1893

FREDERIC H. FAY, *Secretary*, 15 Beacon Street, Boston 9, Mass.

GEORGE B. GLIDDEN, *Assistant Secretary*, 551 Tremont Street, Boston 9, Mass.

The next meeting of the Class will be held early in June and will consist of an afternoon outing and dinner at a country club near Boston. Watch for notice of place, and date.

Forty members were present at the winter meeting and dinner of the Class at the Algonquin Club, Boston, on Friday evening, February 3, the largest attendance for many years. Some were present who had scarcely been seen since we left the Institute. The notice stated that part of the evening's program would be a discussion of "Suggestions on how we shall celebrate our thirtieth anniversary, June, 1923, seeing Kaiser Bill cheated us out of our twenty-fifth birthday." From the way the members turned out at this dinner and from the suggestions offered it is evident that our thirtieth celebration next year will make up for what we missed at our twenty-fifth due to the stress of war. It is too early to outline next year's plans, but by vote of the meeting arrangements were left to a general committee appointed by President Fabyan, as follows: George Glidden, chairman; Henry Morss and Bert Dawes, vice-chairmen; and Ames, Beattie, Bemis, Biscoe, Buchanan, E. B. Carney, Crosby, Dearborn, Dillon, Emery, Fay, W. S. Forbes, Hopewell, Keith, Latham, Lord, Edward Page, Solomon, Speer, Spofford, Taintor, Tomfohrde, Waldron, Wingate. One feature of the anniversary will be the publication of a Class catalogue to contain, in addition to the usual personal records, photographs of the members while at Tech and today; so it behooves the members to get their pictures taken if they have not done so recently, and to have them taken early, as the preparation of the book will be begun next fall to insure its publication on the first day of the reunion. Our thirtieth anniversary was but a part of the evening's program, however. During the dinner music was furnished by the club orchestra and by J. B. Blair, of the Class, who gave two selections on the flute and a song, most acceptably. Wright Fabyan, the newly elected Class president, welcomed the men in a short address in which he outlined something of the plans for the coming year, and pointed out that while '93, unlike some of the other classes, has no conspicuously shining lights, the Class already had made a reputation for Tech spirit and class fellowship — a reputation which we can increase as the years go on. C. M. Spofford, who is head of the Department of Civil and Sanitary Engineering, spoke of present conditions at Technology and particularly of the student activities which are far greater and are handled by the students much better than in our day. C. L. Norton, another '93 Tech professor, who has succeeded Dr. William H. Walker as director of the Division of Industrial Cooperation and Research of the Institute, described at some length the work of this division which is rapidly coming to be one of the important functions of Technology in making available to the industrial world, readily and in a practical way, the specialized knowledge of the Institute's teaching staff and the resources of its libraries and laboratories. Henry Morss, assistant treasurer of the Institute, and John Solomon and J. A. Emery who came over from New York solely for the dinner, and many others, contributed to the evening's entertainment and participated in the discussion of next year's reunion program. The evening concluded with a demonstration of some remarkable card tricks by Mr. Simmons, a Boston amateur, who has recently achieved a deservedly high reputation in this field of entertainment. The members present were:

F. B. Abbott, M. B. Biscoe, J. B. Blair, S. A. Breed, W. W. Crosby, H. N. Dawes, G. K. Dearborn, E. D. Densmore, A. B. Edwards, J. A. Emery, F. W. Fabyan, F. H. Fay, H. A. Gilson, G. B. Glidden, C. F. Hopewell, A. L. Kendall, E. Kenison, W. D. King, W. F. Lamb, H. M. Latham, H. A. Morss, C. L. Norton, W. B. Page, L. W. Pickert, R. D. Reynolds, H. L. Rogers, A. A. Shurtleff, F. D. Smith, J. I. Solomon, C. M. Spofford, L. B. Stowe, J. F. Tomfohrde, C. A. Tripp, L. B. Vining, J. S. Wadsworth, C. C. Waitt, S. P. Waldron, C. R. Walker, R. N. Wallis and H. C. Wilson.

An unusually large number of members who were unable to attend the Class dinner February 3 sent in their regrets and greetings to those present. Several will be at the next meeting in June of this year, and many are already planning to attend next year's thirtieth anniversary. Among the February absentees who rarely miss a meeting were Fred Dillon who was in the South and Farwell Bemis who was on his way to India on a trip which will take him around the world.

Any suggestions any member can offer regarding next year's thirtieth Class reunion are wanted by the General Committee. Send them to George B. Glidden, chairman, P. O. Box 1604, or 551 Tremont Street, Boston. It may not be possible to adopt every suggestion but all will be greatly appreciated and collectively they will contribute to the success of the reunion.

The *Mexican Post* of February 23 contained a picture of Charles V. Allen who is one of the founders of the Rotary Club in Mexico City. The club was organized April 11, 1921. It has built up a good membership and through its meetings which have been held

regularly every week and its monthly publication, *The Aztec Call*, it has come to exert a considerable influence in the commercial life of the Mexican capital. Allen has been Mexican representative of the Westinghouse interests for many years.

William Wyman Crosby died at his home in Arlington on March 19, from influenza and heart trouble, after an illness of two weeks. Crosby was born at Woburn, Mass., on March 3, 1871, and was the son of William and Florence Crosby. After studying in the Woburn schools he entered the Institute in 1889 and was graduated from Course II in 1893.

The next two years he spent at the Institute as an assistant instructor in mechanical engineering, leaving there in 1895 to become superintendent of power and plant for Otis Allen & Son of Lowell. During the last year of his connection with this company he also served as lecturer and professor of mechanical engineering at the Lowell Textile School of which he was appointed principal in 1898, which position he held for several years until he was appointed factory manager of the Brighton Mills at Passaic, N. J.

He returned to Boston in 1907 and since that time had been actively engaged in the practice of mechanical engineering in that city, first being associated with the F. W. Dean Company, mechanical engineers, but for the greater part of the time having been a partner in the firm of F. M. Haven & William W. Crosby, engineers and architects, 40 Court Street, Boston, Mass., specializing in mill and industrial lines and in waterworks.

In his earlier professional work Crosby gave considerable attention to mercerizing processes and to the testing of textile fabrics, and lectured upon textile matters before the Society of Arts and the Twentieth Century Club of Boston and numerous organizations. He also presented papers upon the "Metric System," "A Piece of Cloth" and "European Echoes."

He has held, at one time or another, numerous public positions, including that of chairman of the school committee of Woburn, trustee of the Choate Memorial Hospital of Woburn, park commissioner of Arlington, chairman of the committee on revision for the Arlington building laws and chairman of the building committee for the recently completed junior high school in Arlington Heights.

Before the World War he served as a member of Company G of the 5th Regiment of Massachusetts Volunteer Militia, and during the war he was active in the design of power plants for mills making textiles for the army and for tin smelting plants.

He was a member of the Masons, the Winchester Country Club, the Engineers Club, the American Society of Mechanical Engineers and the National Association of Cotton Manufacturers.

In 1909 he was married to Miss Marian Shaw, of Woburn, who died four years ago. He was to marry this month Mrs. Estella M. Abbot, of Lexington. He is survived by a son, William W. Crosby, Jr., born on July 1, 1912, and by his mother, Mrs. William Crosby, both of Arlington.

Crosby was always an active and popular member of the Class, a regular attendant at its dinners and one whose loss is keenly felt by his associates in business and in the Class.

CHANGE OF ADDRESS

Samuel D. Dodge, Room 3111, Singer Building, New York City.

1895

FRANK A. BOURNE, *Secretary*, 70 Kilby Street, Boston, Mass.

The annual business meeting and dinner of the Class were held this year on February 28, at the Walker Memorial. Dinner was served in the Faculty Dining Room to Booth, Brackett, Whorf, Tillinghast, George Shepard, Hannah, Cannon, Hunt, Frank Bourne, Gus Clapp, Barrows, W. D. Parker, Rockwell, W. S. Williams, and "Buck" Canfield. Buck, who was elected an honorary member two years ago at Saybrook, represents his father at the Institute just now, being in his senior year. After dinner, the secretary read his report which showed that the Class was not only solvent, but has a comfortable balance to turn over to the new secretary. The three-year term of the president and secretary having expired, Frederick A. Hannah and Frank Bourne were elected respectively president and secretary for the next three years. After passing a unanimous vote of

thanks to the retiring officers for their untiring labors and notable accomplishments, including the 25-year Class Book and the memorable twenty-fifth reunion, the Class, as promised in the notice, dispensed with speeches, and adjourned to the bowling alleys where four teams were organized, and the rest of the evening was spent in piling up competitive scores. Team and individual prizes rewarded the victors. The affair was voted the best we have had, and we shall probably continue to hold meetings and dinners at the Walker Memorial where we see something of the new Institute and student life, so different from the old one of our remembrance.

At the New York dinner on February 8, '95 was represented by thirteen men — Schmitz, Donham, Drake, Swope, Canfield, Swift, J. H. Gardner, Claflin, Moore, Hannah, Wiggin, Thomas and F. B. Cutter — the second largest representation present. '17 had fifteen.

The New York members of the Class are lunching on the last Wednesday of each month. The first luncheon was called by Arthur Canfield on February 24 at the Machinery Club, 50 Church Street, and was attended by Canfield, Schmitz, Huxley, Hannah, Thomas, Fred Cutter, and de Jonge. The next will be called by Fred Cutter on March 29, at the Engineers Club, 32 West 40th Street. Until a permanent place is selected and announced, any member of the Class who is in New York on the last Wednesday of any month, is urged to call up one of the New York members and find out where to meet them. '95 is the liveliest Class in New York, and will always have a welcome ready for visiting members.

Gerard Swope, as the Class Book issued in 1920 records, received the Distinguished Service Medal from the United States Government and the Decoration of the Fourth Order of Merit of the Rising Sun from the Emperor of Japan. In addition to these, he has now been decorated with the Legion of Honor by the French Government.

Major P. M. Churchill is acting as consulting engineer for the Drainage Board of the State of Massachusetts. In the *Boston Herald* of February 12, he says:

"For generations New Englanders have farmed the hills and let the swamps lie idle. We have tried to fertilize the hills and let the rains wash the good soil down into the swamps, where during countless ages nature had already deposited fertile matters. Clearing the hills of their forests has added to this impoverization of the upland soil. It is time we let the forests grow on our more barren hills and begin to till the swamps, where the soil is already rich. When we cultivate these swamps we will not need to bring our asparagus from Texas, our lettuce and celery from the South and many other green crops from Illinois. In the state of Illinois alone roughly four thousand five hundred acres have been added to the state's 'agricultural capacities' by drainage and present plans provide for nearly as much additional drainage in the near future."

Whorf is the first '95 grandfather. He was also the first to be married and the first to have a son graduate from the Institute.

Harold Barrows is president of the Parent-Teachers Association of Winchester, Mass., which has been conducting a campaign to make the youth of Winchester take their pleasures in a more wholesome way — and like it.

Col. Thomas H. Wiggin returned in December from China, where he has spent the last two years as head of an engineering party investigating the Yellow River, to determine what can be done to confine it to one bed, and also to aid in famine prevention. In January he gave an account of his trip at a smoker at the Technology Club of New York. He has opened a consulting office in New York at 50 Church Street, where he will welcome friends and prospective clients.

Sam Hunt writes: "Please note change of address, and that permanent address is now 263 North Bay Street, Manchester, N. H. Temporarily I have turned student and am spending a very profitable year at the Harvard Graduate School of Business Administration."

E. J. Loring, who is in the Army Ordnance Department, developing special instruments for use on bombing airplanes, has an article in the *Scientific American* for January on "Bombing and Bombing Sights." The magazine calls him "Dr." E. J. Loring. Where did he get it?

Letters addressed to: De Nise Burkhalter, Superintendent, Indiana Creosoting Co., Bloomington, Ind.; C. F. Eveleth, care Goethals, Wells & Co. Inc., 150 Nassau Street, New York, N. Y.; Capt. Louis A. Abbott, Room 3732, Munitions Building, Washington, D. C., have been returned to the secretary "unclaimed." He wants to know their present addresses.

The annual reunion will be held at the Riversea Club, Saybrook, Conn., again this year, early in June — probably the tenth and eleventh. The secretary will send out notices well in advance, and wants members who have any choice of date to let him know as early as possible, so that he may arrange for the week-end that will suit the greatest number. This will be our third year at Saybrook, and those who were there at the Big Time say they will go every year when possible. No summer home or country club can offer better quarters, grub, golf, tennis, swimming, roads (always some cars), or scenery. Frank Schmitz says a round dozen of New Yorkers are pledged to go this year. Ben Adams, the Great American Blower (look at the company he's in!), wrote the secretary after our last reunion, "Do not think that my failure to be present this year is indicative of my stand, for I am surely coming to the Institute reunions whenever possible."

1896

CHARLES E. LOCKE, *Secretary*, M. I. T., Cambridge, Mass.

J. ARNOLD ROCKWELL, *Assistant Secretary*, 24 Garden Street, Cambridge, Mass.

At the banquet in the Walker Memorial in January, five '96 men were present, including Will Hedge, Joe Knight, John Rockwell, Sam Wise and the secretary. No one had any very startling information to report although Wise said that he was going to make an automobile trip in March to Florida and was busy arranging itinerary, getting reports as to depth of mud and cost of living in the South.

The New York bunch of '96 men are getting right up on their toes. At the meeting of the New York alumni in the McAlpin Hotel on Wednesday evening, February 8, '96 was well represented by seven members: T. I. Jones, F. G. McCann, Guy Morrill, John Tilley, G. C. Hall, F. Haskell Smith and Charles E. Lawrence. A fine time was reported. After the scheduled speakers had finished, Lawrence took the floor and announced to the alumni what '96 had done at their twenty-fifth anniversary in the way of a class scholarship fund, and he good-naturedly challenged '97, '98 and succeeding classes to do likewise.

When the secretary was in New York attending the annual meeting of the American Institute of Mining Engineers in February, the crowd took advantage of the fact to have a little luncheon on Tuesday, February 21, at the Technology Club on Gramercy Park. The arrangements were made by Tilley and he certainly did a good job. Present were Billy Andrew, Charlie Trout, Guy Morrill, Woodwell, G. C. Hall, Lawrence, Sager, Tilley and the secretary. Frank Howard had expected to be present but failed to turn up. The time passed all too quickly and it was the opinion at the close that the secretary ought to make a frequent trip to New York so that such luncheons might be held more often. Woodwell arrived a little late but was in his usual good form. Just now he is particularly busy on a large-sized steam plant in Lansing, Michigan, and he reports that he has McGonigle associated with him on this work. Woodwell gave the party the benefit of his latest creed and expounded his views on the tenets of the sunshine organization. After the luncheon was over two or three of the fellows went to Woodwell's office for a tour of inspection and introduction. Sager reported that his business was dropping down a little bit, indicating that times were generally better. He has found it a universal rule of the patent lawyer that when business men are making money they are satisfied to let patent litigation alone, but when a period of depression comes they then have time to look into patents and try legally to get something out of the other fellow. Hall and Lawrence are officers on the Technology Club this year. Billy Andrew has forsaken Canada and come to New York. For many years he was with the Canadian Westinghouse Company in Toronto. Later he was with an association of manufacturers of electrical supplies in the same city. In New York he is doing general electric work. He could not make it quite clear to the members why he had seen fit to cross the line from Canada at this particular time. Charlie Trout still lives on Staten Island and works for Henry Steers, Inc., 17 Battery Place.

The secretary saw considerable of Bradley Stoughton at the Mining Engineers meeting, but, of course, Bradley was too busy to be able to attend a '96 luncheon. Although he is no longer an official in the Mining Engineers, still his long service makes him of great help at the annual meetings and he finds it very difficult to do anything else while they are on. He has moved his family to Greenwich, Conn. He was elected President of

the Yale Engineering Association on February 2, 1922. His son, Philip, was married recently.

Part II of a Textbook of Geology by A. W. Grabau has now appeared and is devoted to historical geology. Like Part I it is a departure from usual textbook schemes and emphasizes stratigraphic rather than biologic developments.

Louis Freedman is now on a European trip.—Guy Morrill is still associated with the New Era Presbyterian movement and recently made a trip to Indianapolis.—Charlie Morris now reports change of address as Captain Charles Morris (S. C.) U. S. N., U. S. S. California, Pacific Fleet, care Postmaster, San Francisco, Cal. Theoretically he is on sea duty. Actually he is tied up to the wharf through the kind offices of the legislators in Washington. It has been many years since he was on the Pacific Coast and he is glad to visit it once more. He notes a tremendous development. He is sorry the fleet cannot cruise freely and states that it now looks as if he would be tied up indefinitely at San Pedro and he hopes that if any '96 men are in the vicinity of Los Angeles they will make it a point to come aboard the *California* and see him. He is on the staff of the commander-in-chief, Admiral Eberle, having charge of finance and supply. Sometime he hopes to be able to visit Technology and inspect the new buildings which he has never seen.

George Hewins has moved from Vernon, Vt., and is now president of his company which is the Power Construction Co. Henceforth he will be at the head office at 35 Harvard Street, Worcester, Mass.

Joe Stickney refutes the idea that Merrill has any vestige of claim for the heavy-weight record for '96. Joe says that he has seen Wayne very recently and there is no question but that Wayne is still in the lead and has mighty good handicap over any possible competitors. Stickney is associated with the Fletcher American Co. of Indianapolis. He was for a long time with the Central Union Telephone Co. and later with the Nordyke Marmon Co. as director of personnel in connection with that company's Liberty Motor contract with the Government and has had a wide experience in dealing with employees' relations. The *Coupon*, which is the industrial organ of the Fletcher American Co., has the following to say about him. "Joe is a courteous gentleman, who respects the other fellow's rights, with a long list of friends around Indianapolis and the whole of Indiana; has a reaction to every question you ask him; thinks faster than he talks; he, only, knows whether he has a temper; don't have much hair on the top of his head and none on the inside; has a nice wife and because 'Jess' likes this picture so much we thought we would give you a chance at it." The picture is in the original.

George S. Bowes who was many years superintendent of the open hearth department of the Page, Steel and Wire Co. in Monessen, Pa., is now reported to be located at New Cumberstown, Ohio.

It is with great regret that the secretary reports the death of Charles W. Davis. Davis was born in Allegheny, Pa. He received his early schooling there and was graduated from the Western University of Pennsylvania (now University of Pittsburgh) before entering Technology. After his graduation from Technology a serious break in his health necessitated his going West where after recuperating he entered into business and became connected with the Los Angeles Gas and Electric Co. From this company he entered the employ of the Standard Underground Cable Co. about 1900 and remained with them continuously until his death. Davis left a wife and two daughters who were residents of Sewickley, Pa., but who are at present in California. He also has one brother, Norman C. Davis, who is connected with the Standard Underground Cable Co. at their Perth Amboy plant. The following resolutions were adopted by the directors of the Standard Underground Cable Co. at a meeting held in Pittsburgh on Tuesday, September 27, 1921.

"Resolved: That this Board place on record, its appreciation of the loss sustained by this Company in the death on September 11, 1921, at the Memorial Hospital in New York City, of Mr. Charles W. Davis, who had been continuously connected with the Company for more than twenty years past. Mr. Davis first entered the employ of the Company in 1899, in connection with the installation of a large contract for cables for the Independent Light and Power Company of San Francisco, and which was the occasion of this Company's building its Oakland factory. Immediately following, he very successfully superintended the installation of a large amount of cable in the City of Mexico, which had long been regarded as one of the most notable installations of steel-taped cable on this continent. Upon his later transfer to Pittsburgh, he was subsequently connected with the General

Sales Department, and later became manager of our central sales department and general construction department. During this time he also originated and directed the development of our comprehensive and well-known line of cable terminals and junction boxes now comprised in our Accessories Department. In 1915 he was elected a vice-president and appointed general sales manager, which offices he held at the time of his death.

Mr. Davis had had a thorough technical training, and possessed in unusual degree, a keenly analytical mind and a highly developed and accurate engineering sense. Aside from a high order of ability and painstaking thoroughness in directing work normally delegated to him, he had marked ability in engineering development and research. His mastery of complex technical problems, his keen farsighted analyses of them and his constant endeavor to search out their inherent commercial application, or advantages, exemplified in him the rare combination of the highly technically trained theorist and skilled engineer, with the sound business judgment of the trained executive. With an active mind in a body which was none too strong since his illness of early manhood, his health had partially failed during the past few years, although after a considerable absence under most competent medical advice which had given him assurance of a prospective return to sound health and normal strength, he was stricken, on almost the exact date of his return to active duty, by an illness which soon proved fatal. As an associate, he was a delightful companion, a gentleman in every instinct and action, and a loyal and valued friend and co-worker in all his official and personal relations."

Ed Pingree is still regretting his inability to be present at the Class reunion last June. He was somewhat knocked out about a year ago and even now has not yet fully recovered from the effects, but is on the way.

Fred Ashley is another man who just failed to be with us. He came all the way from Los Angeles and reached Boston Saturday night, June 18, and stayed until the following Thursday, being on the jump every minute. He made a stop over in Salt Lake City to see Cannon whom he found so busy that he could not think of attending a reunion. The only '96 man whom Ashley was able to find time to see while in Boston was Dr. Cheney who is making his headquarters at the Boston Public Library.

Sam Hunt is taking the advantage of a dull period and putting in the time in a year's course at the Harvard Graduate School of Business Administration. His address until June, 1922, is 65 Hammond Street, Cambridge, Mass., but his permanent address is 263 North Bay Street, Manchester, N. H.

The secretary finally collected sufficient amount of Class dues so that he was able to turn over to Dr. Rowe \$50 for Technology athletics. In acknowledgment of the same Dr. Rowe expressed his thanks and that of the Advisory Council, and stated that in the present stringency of financial matters in regard to athletics, this contribution was going to be of much assistance.

At a meeting of sixty-five Technology Alumni in Washington in February, Joe Clary was elected president of the Washington section for the ensuing year.

Professor Miller of the Institute received a signal honor recently. The Institute undergraduate paper, *The Tech*, announced that Professor Miller was a member of the Class of 1896. We are not quite sure whether he fully appreciates the honor of being called a member of that illustrious Class.

Louis Morse has been sojourning in the South. He reports that he had not been feeling quite up to the mark for a year or more so that on the first of December he gave up his work and after Christmas went to Southern Pines, North Carolina, where he stayed during the months of January and February and was very much benefited by the stay. He reports that his nerves had been in such shape that he could not sleep at night and that he had further complications of eye strain and nervous indigestion, all of which ailments have disappeared so that he is back at his desk again taking up the work in a rather easy fashion so as to break himself in gradually to the grind of an engineer. He feels, however, that he is in such shape that he can now keep in good condition.

Sons of '96 men are becoming rather numerous at Technology. Frank W. Smalley is of the Class of 1924 taking Chemical Engineering and Charles M. Tucker is of the Class of '22 taking Chemistry. N. Thompson is following in his father's footsteps and taking Mechanical Engineering. He is of the Class of '23.

Myron L. Fuller, XII, sailed from New York for England on March 11, to be gone about eight months, during which time he plans to visit France, Switzerland, Germany, Belgium, Netherlands and Norway in addition to Great Britain and Ireland.

W. H. Colman in a modest way states that he has no news to report concerning himself but hopes to have in a year or two. He says that he has spent much of his time since he left Tech in the search of health and now feels that he has found it. He is at present at 66 St. Nicholas Place, New York City, but his permanent address remains Hopewell, N. J.

Dickinson's appointment to the professorship of electrical engineering at the University of Vermont was reported in the last issue but the following summary of his work as it appeared in the *Electrical World* of January 7 is interesting: "Professor Dickinson was graduated from the Massachusetts Institute of Technology in 1896. Immediately after graduation he was connected with the American Telephone and Telegraph Company and the General Electric Company for two years, after which he served as instructor in electrical engineering at the University of Maine, Armour Institute of Technology, and Massachusetts Institute of Technology. From 1903 to 1909 he was instructor and assistant professor of electrical engineering in Lafayette College, and from 1909 to 1915 he was professor of physics and electrical engineering in Rhode Island State College. In 1919 and 1921 Professor Dickinson was professor of electrical engineering in Robert College, Constantinople, Turkey, and upon his return to this country was appointed professor of electrical engineering in the University of Vermont and put in charge of that department. Professor Dickinson is an associate member of the A. I. E. E. and a member of the Society for Promotion of Engineering Education."

Bert Thompson is as busy as a bee these days. He is especially pushing the Merrill process of industrial heating by oil circulation which appears to have broad possibilities. His company, the Parks-Cramer Company, of the Old South Building, Boston, Mass., has recently issued a 76-page book on oil heating for industrial purposes.—Lucius Tyler is another fellow who is always seen on the move. His pet is the Kelsey friction drive automobile. He has featured this in both the New York and Boston Auto Shows.—Frank Guptill called upon the secretary on January 17. He is now with the bond house of Coburn Kittredge & Co., and he has been practising salesmanship upon the members of the instructing staff at Technology.

Meyer Sturm of Chicago put one over on the secretary when he sent in his money for Class dues and remarked that he was paying the assessment for the sole purpose of enabling the secretary to send him some more notices. Maybe some of the other fellows feel that way but have feared to say so.

The class book is now in shape to go ahead actively in that the last member of the underwriting syndicate has just made good so that the complement is complete and the financial question is solved.

Rev. John Whitmore died on June 25, 1920, at the Eastern State Hospital in Tennessee. Dr. Whitmore will probably be remembered by comparatively few '96 men in that he was at the Institute for one year only and took special work. He had been ill for about three months prior to his death. It is understood that a great part of his life had been spent in church work where he appears to have been very successful. He stood very high with his church people at Sewanwee which was his last pastorate before his mental illness forced him to give it up.

Through the efforts of Professor Jacobs of Burlington, Lamont R. Stroud who has been missing for some time has been finally located at Ballston Spa, N. Y., where he is a civil engineer.—W. B. Corson is now in the business of running a store in Savannah, Ga.—The secretary has been unable to get any clue of the whereabouts of H. S. Bolan. Joe Franklin, Jr., also, who was located in Los Angeles a few years ago, has again disappeared so that no trace of him can be found. If any classmate has any suggestions as to where either Bolan or Franklin may be located the secretary will be very glad to receive them.

Con Young is now located at 724 Ninth Street N. W., Washington, D. C. In a recent letter he contrasted the enjoyable time which he had at the reunion last June with the rotten time he had a year previous when he arrived in Boston planning to be with us at Terrace Gables and was confined to his room in Boston for a week with a bad attack of tonsillitis. He has been at his new address since the middle of November and has a private office in a suite with Benjamin R. Newcomb who took mechanical engineering at Yale and later graduated in law in Washington. The latter has been quite successful in patent law work. Young is continuing his special government work for the Armstrong Cork Co. and is devoting his spare time working with Newcomb along the line of mechanical investigations especially connected with patents. He is prepared to welcome socially any '96 man who may call and guarantees a new story for every new comer. He is also in a

first class position to take care of patent commissions for his friends and render prompt and satisfactory service.

The following changes of address have been received from the Alumni office:

Capt. William P. Anderson, Third and Elm Streets, Cincinnati, Ohio; William M. Andrew, 424 Fort Washington Avenue, New York City; Harold W. DeLong, 6 Garden Street, Bath, Me.; Prof. Leonard P. Dickinson, University of Vermont, Department of Electrical Engineering, Burlington, Vt.; Harry W. Dyer, 326 William Street, East Orange, N. J.; Robert D. Flood, 226 West Adams Street, Chicago, Ill.; William E. Haseltine, Ripon, Wis.; Arthur W. Hodges, 489 South Main Street, Randolph, Mass.; Prof. James L. Howe, Lexington, Va.; Joseph M. Howe, 812-816 First National Bank Building, Houston, Tex.; Benjamin Hurd, 70 North Road, Nutley, N. J.; Charles Johnson, Memphis Artesian Water Department, Memphis, Tenn.; Marshall O. Leighton, National Savings and Trust Building, Washington, D. C.; Edward S. Mansfield, 15 Cabot Street, Winchester, Mass.; Frank McCann, Flatbush Avenue and Concord Street, Brooklyn, N. Y.; Capt. Charles Morris, U. S. N., U. S. S. California, Pacific Fleet, care Postmaster, San Francisco, Calif.; Frederick F. Schaller, 2704 Thirteenth Street, N. E., Washington, D. C.; Mortimer A. Sears, 1424 B Street, S. E., Washington, D. C.; Charles E. Stamp, 616 St. Clair Avenue, Cleveland, Ohio; Joseph W. Stickney, care Fletcher American Co., Indianapolis, Ind.; Bradley Stoughton, Greenwich, Conn.; John Tilley, 41 East 42d Street, New York, N. Y.; J. Lloyd Wayne, 3d, care Union Trust Co., Indianapolis, Ind.; John H. Willis, 288 Washington Street, Hartford, Conn.; Conrad H. Young, Victor Building, 724 Ninth Street, N. W., Washington, D. C.

1897

CHARLES W. BRADLEE, *Acting Secretary*, 54 Canal Street, Boston, Mass.

Arrangements have been made to hold the TWENTY-FIFTH REUNION of the Class of '97 on June 23, 24 and 25 at the Riversea Club, Old Saybrook, Conn. This club is the seashore branch of Lake Placid Club, Adirondacks, and is very attractively located on Long Island Sound at the mouth of the Connecticut River, about half way between New York and Boston, and in easy reach of all New England points by automobile and railway. There will be golf, bathing, fishing, etc. Notice giving details will be mailed each classmate some time in April. Be sure to save these dates, June 23, 24 and 25. Automobile transportation from New York and Boston will be provided. If you cannot stay all three days arrange to come and stay as long as you can.

Now for some news items of our classmates. Arthur T. Hopkins has been elected treasurer of the engineering firm of H. M. Crosby and W. E. Crosby, Inc., with offices at 40 Court Street, Boston, and will develop his specialty of industrial reports, engineering and management in connection with the usual engineering work of the Corporation.

Professor Locke sent in the following: R. G. Hall, V, arrived back with his family from Burma about Christmas time and has not definitely settled anywhere as yet, although he is maintaining his address at the University Club, St. Louis, Mo. He is inclined towards consulting work, although he realizes it is rather a poor time to start. Just now he is engaged in the furtherance of the electrometallurgical treatment of complex ores with a view to cheapening the operation. Before he went to Burma he was interested in a plant at Keokuk, Ill., and is fortunately able now to make use of the plant for his experimental work. Hall has specialized in the treatment of complex ores for years and he should find a wide field for the use of his talent and knowledge. He rather expects ultimately that he may land in New York or San Francisco.

Rodolphus A. Swan, VII, was elected city clerk of the City of New Bedford, Mass., on January 3, 1922. He succeeded Walter H. B. Remington who was elected mayor.

The *Boston Traveler*, January 14, 1922, contained the following: "A movement to change the name of Bunker Hill, Charlestown, to Breed Hill, and the name of the shaft erected on the site of the famous battle in the Revolutionary War to Breed Hill Monument, was started today by officials of the Breed Family Association of Lynn. Miss Sarah Allen Breed, secretary of the association, and Charles B. Breed, its president, who is also a member of Tech alumni, maintain that the hill and spire were wrongly named. They will make every effort to have the name changed."

Oswald C. Hering of the Class of 1897, M. I. T., was re-elected president of the Delta Kappa Epsilon Fraternity, March 4, 1922. Delta Kappa Epsilon has forty-three chapters in the leading colleges and universities of the land, and her alumni number between thirteen thousand and fourteen thousand.

Incidentally Mr. Hering intends to be at our twenty-fifth reunion in June with his famous pup Nini, which won a first prize at the New York dog show.

Members of the Class will have noted with interest the biography of William C. Potter, Course III, circulated with the annual ballot for nomination.

The following interesting communications have been received as a result of our card asking for dope for the April REVIEW: "At the request of the Executive Committee for information concerning Class news, a self-appointed committee here in New York submits the following spasm.

(Signed) GEORGE R. WADLEIGH.

To Class of '97 M. I. T.: Greeting! It being an inherent and inalienable right of every freeborn American to appoint himself upon a committee, providing that thereby he incurs no responsibility whatever, be it therefore known in view of the total failure of the Executive Committee of Class of '97 to execute for the last TECH REVIEW, that we, Citizens of New York State and members of Tech, '97, do appoint ourselves an Auxiliary Executive Committee of Class of '97, M. I. T., with all the powers that we care to assume and with no responsibility whatever, and do proceed to discuss, ordain and aux-execute. To wit:

First: No New York member may attend an annual banquet in Boston unless assured of a seat at the '97 table. When a man has traveled two hundred and fifty miles and waits until seven for dinner and finds all the sixty '97s who live within ten miles of Boston — that is, all but fifty-three — have pre-empted all the seats, it is time to protest. Ned Olin, Al Woodman, Frank Doliber, Charlie Currier, and others, who make the dinner every year, might leave room for one or two out-of-towners when they know they are coming. *Second:* No New York man may attend the twenty-fifth at Saybrook (which we agree is a happy choice) until supplied with a certified copy of insurance policy to the amount of one thousand dollars, covering possible furniture damage and paid for by Charley Bradlee.

Reasoning:

Elapsed time of alumni banquet 3 hours = t
Proposed time at Saybrook 72 hours = T
Cost of Walker Memorial chair \$6.00 = c
Possible bill against '97 for furniture breakage = B
Bradlee weight 400 lbs. = W
Bradlee diameter at waistline = f
and $F = ma$

We have:

$$B = \int_{\text{Floor}}^{400 \text{ lbs.}} \frac{\phi W}{T^2} \left(\frac{W}{\sqrt{T^2 + t^2}} \right) \sqrt{\frac{2f}{c}}$$

Therefore

$$B = \$982.33$$

Third: Out of any moneys not otherwise expended Billy Potter shall be paid the expense of the Saybrook trip. Since his Long Island home was robbed last year he has been in doubt about raising the necessary funds.

Fourth: The executive committee shall provide a bodyguard for Russell the next time he comes to New York to fend off designing 'cousins.' Russell came to Manhattan in December ostensibly to attend the American Society of Mechanical Engineers meeting. Fortunately, two members of the Auxiliary Executive met him soon after his arrival. For two strenuous days they kept him in line, but by Friday night he had them both winded and at 11.30 he escaped, the last seen of him was near 42d Street headed up Broadway looking for another 'cousin.'

Fifth: '97 must not sit at the same table as '98 at the next New York Tech dinner.

Hopkins, Jennings, Howes, Hamilton and Wadleigh were at the dinner. Hosford, Hunt, Howland, Ewing, Pratt and others were there in spirit; also Mason, who has been seriously sick with pneumonia for two months. Those not there missed a great deal. They missed 283 of Lester Gardner's stories. Hurrah for '98 when they sit at another table! *Sixth*: Frank Feeley and Walter Bush shall eliminate all pseudo-friends with a glib tongue, the air of a prosperous western miner, a knowledge of the members of '97, and a touching story. He touched Jennings for a ten, who will now be unable to get to Saybrook.

Done under our hand and properly aux-executed this fifteenth day of March, 1922.
—*The Auxiliary Executive Committee '97.*"

Henry W. Loomis writes as follows:

"For the past five years I have been connected with the National Cannery Association, the national organization of food canners, and have had charge of the inspection of canneries in all parts of the country. This work has now been combined with my duties as an assistant secretary of the Association with headquarters at 1739 H Street, N. W., Washington, D. C. The only '97 men I have seen for many years are Stiles, Franklin and Hallowell, who is in the Navy Department here. I should like to hear from any of my friends in the class of '97 and hope to attend the twenty-fifth reunion in June."

W. O. Sawtelle starts out by saying: "My dear Charles: You are hopeless! I trust this will keep you quiet for a while." He ends up with: "Well!! Well!! Has it come to this? Here's old Charlie Bradlee hollering for dope. Years ago when I first knew Charlie I thought him a most exemplary young man. Now he is begging piteously for dope. My mistake. He only wishes a few words for the REVIEW. I do wish people would be more particular in their use, or abuse, of the English language. Charlie means well and is such a genial cuss that we forgive him."

There isn't much for me to say, just pegging along from day to day, reading the notes as they appear in the REVIEW, notes, by the way, which are all too few. Why aren't they set in larger print? My eyes are poor and I have to squint. What's this we hear about Charlie Breed? For in a recent Boston paper, didn't we read that he was up to some new caper, couldn't rest until he'd carved his name on Bunker Hill? Prating about some omission and putting it up to the Park Commission. It's great to be in the public eye. Perhaps we'll all be bye and bye. But why should Charles seek fame monolithic? Let him construct some dam granolithic, furnish us power they call hydro-electric, figuring all stresses and strains in the metric, and getting results in kilowatt-hours. Let the dead past bury its dead — no flowers. So Tom Atwood's down among the southern pine. I'll wager twenty to nine, that he stands head and shoulders above mountains and boulders, like a massive figurehead forlorn. Two to one he's got his rubbers on. Where's Worcester? Don't hear as much of him as we used ter, he of the jovial light weight band — selling sugar? Well, Harry always had the sand. And Walter Humphreys is still in clover. If he had his life to live over I know he would choose to make out tabular views. So much for the news. If I had time I would put it in rhyme. Now at last you have my history for twenty-five years past. Sawtelle, H. F.? Why don't you know, not H. F. but W. O.?"

Gilmore writes from Norton, Mass.: "My dear Bradlee: I have your March 4, card about the REVIEW. I have also one of your self-addressed envelopes stamped with a three-cent stamp that has been waiting ever since the war for some news worth sending. Not having any that is worth sending even yet, I will send some that isn't: namely that I was elected an auditor of the Town of Norton, March 6, 1922. I still have enough interest in electricity so that I urge the subject of street lighting upon each Town meeting, but the Town 'loves darkness rather than light.' But Wheaton College has lights of its own. Your classmate, John M. Gilmore."

And from O. B. Cagle, secretary of the Chamber of Commerce, Poplarville, Miss., comes the following: "Your card 'Honor of Class demands some dope from me,' received; honestly, is it as bad as that? I did not think that any of the Class could be interested much in South Mississippi. There has been great progress made in education in all branches for the last few years, owing to the consolidated schools and in my own county of Pearl River especially. This is strictly an agricultural section and there are some great developments going on in that direction. The lumber industry will be a thing of the past in ten years in this section, and the people have got to turn to the soil for a livelihood, and this soil produces nearly everything to be grown. We are only seventy miles from New Orleans and that is a good old town, especially for any ill. Some of the M. I. T. boys live there

but I have not had the pleasure of meeting them yet. We are as close to the Gulf Stream as you are to Maine and some of the woods are as nearly impassable as those of that old State. The climate of this country is as fine as that of California, the people are of the best, the game and fish are nearly inexhaustible, politics as hot as —— and plenty of variegated moonshine. It's hard to beat. I am coming to the Class reunion this year, and with all good wishes."

1898

A. A. BLANCHARD, *Secretary*, M. I. T., Cambridge, Mass.

There is an ever ready help in time of trouble for the Class secretary when the quarterly demand for Class news comes from the editor of the REVIEW. He has but to grab the nearest newspaper and find columns of our illustrious classmate Babson: The business outlook given by Radio phone the other evening by Babson; the effect on property values of the production of gold from lead in Germany; advice to all classes of our population, capital, labor, atheists, churchmen, educators and Bolsheviks.

Inspired by this extract from a speech by Babson at Silver Bay, August, 1920 — "If a business man comes to me without first having prayed to God for help, I send him home" — some poetical genius produced the following gem which has been quite freely quoted.

WHEN GOD FAILS, TRY BABSON

When you're having business troubles
And you want statistic's dope
As to whether Jew or Christian
Uses most of Ivory Soap,
You of course think first of Wellesley
Where the busy Babson hives
Turn out oceans of statistics
As to many kinds of lives.
But when first our Roger sees you,
He will ask right off the bat:
Have you told God all your troubles
With your knees upon the mat,
Asked him what you ought to do?
If you haven't — go to blazes!
I will have no truck with you.
For our Roger got religion
At the age of seventeen;
Since then he has been angelic,
As the whole world must have seen.
But the man who needs assistance
For the things which make him blue
Cannot get a bit of guidance
Unless he's religious too.
But it's kind of hard on Heaven,
Where all wisdom reigns supreme.
And it makes our little Roger
Somewhat egotistic seem,
For he tells you in plain language,
When the camouflage is shaved,
Try God first, if he can't help,
Come to Babson and be saved.

But the secretary has ordinarily refrained from devoting whole issues of the REVIEW to Babson, first, because Babson is not really the only great man in the Class, and is not deserving of much more space than many others; second, because the secretary does not want to create the impression that he runs an advertising bureau in the pay of the Babson interests.

But about a week ago a special gift came to the Class headquarters which induces

us to break our precedent and frankly devote this issue to advertising Babson. This gift consisted of copies of three of Babson's books, "Fundamentals of Prosperity," "Enduring Investments," "Making Good in Business." We cannot better indicate the scope and spirit of these books than to quote entire the introduction to the third book, an introduction written by Paul P. Harris of the International Association of Rotary Clubs.

"In this day of heart-breaking competition, making good in business is ordinarily considered as being a job big enough to engage the best energies of any man whosoever he may be, whatsoever his calling. The percentage of men who really make good is pitifully small. To learn of a man who possessed the will power to rise from his bed at a time when he was considered as good as dead, select a vocation, make good in that vocation, using only the most upright and ethical methods in so doing; to learn of a man who did all that, and still has time, and strength, and heart to turn around and tell others how they also can climb the rugged heights, is immensely interesting. What was it — genius? Mr. Babson says not, but just plain upright determination and work. He has a passion for work. But whatever it may have been, one thing is certain, that one who has risen over such obstacles to a great nation-wide success has qualified himself to write authoritatively on the subject 'Making Good in Business.'

The service which Mr. Babson's wonderful business organization renders is in the preparation and supply of statistical reports. Statistics are proverbially dry, and yet so thoroughly and so conscientiously is the service rendered, that to many thousands of American business men, the information supplied by the Babson Statistical Organization constitutes the inspiration of the day, a living demonstration of what intensity of purpose can accomplish in the direction of exalting the commonplace.

Babson does not believe in switching from one business to another in the hope that eventually, some smooth path to success may be found. He is not much interested in smooth pathways. His is the pioneer spirit. He prefers to blaze his own trails. His plan is not to see how much he can get out of a business, but rather how much he can put into it; and he views his business as one of his best opportunities to serve society. He has not led the manner of life which one would expect to be productive of a prophetic vision. On the face of it, it has been too closely connected with cold, hard facts. Yet that this man of facts and figures has been inspired by prophetic vision no one who reads this book can doubt. When Mr. Babson looks at an object he observes more than its colour. Colour is only skin deep, and Babson's keen vision pierces the object through and through. He does not waste his fire on little things; life is too brief a sojourn. He considers the possession of his talents a sacred trust, and proposes to render good account of his stewardship. Seeking the spiritual he has achieved abundant success in things material, thereby demonstrating the truth of the adage "He profits most who serves best." What a wonderful instrument is a well-regulated, clean-thinking human brain and how wonderful is power to lift civilization to higher levels!

Thus far, the genius of America has been made manifest chiefly in its business accomplishments. Material demands have been so insistent that it is not remarkable that spiritual progress has been comparatively slow; but he who has concluded that America must trail behind in spiritual achievement may well make new reckonings. Mr. Babson's book, 'Making Good in Business,' tells another story. It should convince skeptics that wonderful things for the world are in the making, and that the new day will be something of an American day because it will have so much of good, clean business in it. American spiritual progress will not be apart from business; business will be one of the expressions of it. Mr. Babson has never resigned himself to the idea that a man should energize himself spiritually on the Sabbath day, and then run through the week, as far as possible, on stored energy. He believes in the observance of the Sabbath day and in the influence of the Church, but he also believes that there should be enough of honesty and purpose, enough of love of service in business to keep business spiritually energized all of the time.

To load so much upon the back of business may appear to some like the imposition of a very severe handicap — a handicap such as must necessarily result in the loss of the race. But, again, Mr. Babson comes forward. He tells us that honesty, sincerity and service have never lost a race since the beginnings of time; that these elements are wings to business, not weight. He considers American business, at present, to be grievously, but not dangerously, ailing. He deplores business depressions as unnecessary and points out methods by which they may be stamped out as a scourge, and prosperity thus be made permanent.

How shall we appraise a book? Very much as we appraise other things, perhaps — by its usefulness. There may be a great deal of gold in a mountain, but it will not be of much interest to the prospector unless the gold can be found there in paying quantities. 'Making Good in Business' will occupy a permanent place in American business literature because of values to be found between its covers in paying quantities. Mr. Babson indulges in no idle phrases. Every paragraph and every sentence has its meaning and its purpose. There is nothing vague or abstract about his philosophy. It is direct, practical, concrete. It revives our faith in the good old-fashioned precepts which, in our heart of hearts, we know must be kept alive, and it stimulates our courage to go forth and fight the battle of every-day life with new hope and with clearer vision. May the readers of this book be many, and may its writer be long spared. There is still much work to do, and efficient workers are none too many. — Paul P. Harris, Office of the President Emeritus, International Association of Rotary Clubs, Chicago, Ill."

Babson's restless soul is never satisfied with accomplishment; he is always embarking on new and bigger ventures. Although this is a characteristic of ineffective visionaries we will admit only that Babson is visionary; his accomplishments show that he is effective. Well, his latest scheme is to build a small city at Wellesley Hills where the men who control the country's great industries will come together and discuss and learn and decide to avert all the ills which now beset the country so that in the future, financial depressions, and unemployment will be unknown. The following clipping from *New York Times*, January 23, 1922 will give some notion of his plans.

"BABSON TO BUILD STATISTICAL CENTRE

"Roger W. Babson is going to build a small city in Wellesley, Mass., and plans to make it the statistical capital of the United States. He has bought 220 acres of land for the site and starts work this spring on two buildings, the first of the group that will eventually contribute toward making it the Mecca where the industrial powers of the nation will gather and work for the betterment of the nation. Mr. Babson declares that today, 10,000,000 people in America are suffering from unemployment — 'extras,' he calls them, who are out of luck except in days of unusual prosperity. In times of depression, it is they, he says, who suffer. Utilize this surplus, he declares, and you have done much toward ending economic unrest and general misfortune. According to Mr. Babson's view these 10,000,000 are the pawns. The players are the employers — some 20,000 of them. He holds that if these 20,000 men were organized into one central organization, the problem of dealing with the 10,000,000 would be simplified. This is what Mr. Babson proposes to do.

He has had the 220-acre plot planned out for a small city. It will not be a chartered city. It will be a gigantic conference ground for all the powers that control production and direct distribution. There will be two great campuses — one for production, one for distribution. Around the first campus will be built the buildings that deal with production — four main buildings, covering every conceivable product. These buildings will be listed under forest products, agricultural products, live stock, and mineral products. There will be the inner chamber of the powers of production. There the men that control the country's great industries will gather. There will be kept their records, their charts, the up-to-date and constantly changing files of statistics. There the secretaries of the National Textile Association, the American Iron and Steel Institute, and other great national associations can discuss the country's problems like the President's Cabinet. From there they may go to lunch together.

'If more of those men who collectively hold the fate of America in their hands could go to lunch together, I am sure business arrangements would be more direct, more affable, and that the people of the country would benefit enormously,' said Mr. Babson.

A lot of land for a building is to be presented to each of these great national associations. Many smaller buildings, subsidiary to these principal four, will be built about the campus. Some associations have already signified their intention of taking these grants.

The other campus will centralize the country's power of distribution. Each State will be requested to keep a building where representatives and statistical files of State conditions will be on hand. Mr. and Mrs. Babson are to present Massachusetts with the first building.

A connecting group of buildings devoted to labor economics, finance, psychology, and factory management will act as a link between the two campuses. There will also be many incidental accommodations, an art building for exhibiting of industrial pictures, a

chapel, a gymnasium, a restaurant, dormitory, golf links, boys' camp, and arrangements for the accommodation of conference delegates and their families. The grounds will be made an ideal place for national conventions.

The Babson Institute, under which the work will be done, is already in existence, and has an endowment fund of \$250,000 as a start, which fund Mr. Babson hopes to increase to \$1,000,000 shortly. Ground will be broken this spring for the first two buildings. The whole affair is being conducted under the direction of a board of trustees, of which George W. Coleman is president.

"Cotton, wool, steel, leather—these and all such mighty words are spelled out in blood," said Mr. Babson. "When deflation like a plague blights the industrial life of the country, it leaves behind it a havoc of poverty and anguish that is seldom known to the general public. We who are not of the unwanted 10,000,000 seldom realize this. Today, among a million men, women, and children of the United States, there is suffering such as never was in Belgium. I realize it is impossible with one idealistic stroke to wipe out the weaknesses of our civilization, to end forever human suffering and misfortune, but I do believe that if there was a closer communication between the controls of production and consumption the time of enormous inflation and the inevitably consequent deflation would be abolished. And I believe that with this abnormal fluctuation steadied, if not destroyed, the great problem of unemployment and resultant unrest and suffering would be largely solved. This central gathering-place of the powers of production and those who are familiar with distribution would do more than anything else I know to stabilize our civilization and bring a national satisfaction and progress. It would be the salvation of the extra 10,000,000. It would help eradicate many of the dark and tragic features of the vast industrial civilization of which this country is most representative."

And now that we have done Babson up brown let us turn to other interests.

The secretary was surprised to find during the past week that a most likeable and excellent student in his class in Chemistry, Leslie B. Bragg, is a son of our classmate Ernest A. Bragg. This makes three '98 sons now known to be in Tech, Lansingh, Barker and Bragg. Are there any more?

Charles S. Hurter has been appointed on the Sectional Committee on Permissible Explosives of the American Mining Congress as the representative of the Metal Mines Branch of the Standardization Committee. He says he doesn't know what it means, so how can we? He says that he is now running an explosives test at the Ritsof Salt Mines.

Wednesday, March 8, the day of the meeting of Tech Corporation, we had a dinner of local '98 men so as to meet with Lansingh who was on for the Corporation meeting.

1899

W. MALCOLM CORSE, *Secretary*, 1701 Massachusetts Avenue, Washington, D. C.

BENJAMIN S. HINCKLEY, *Assistant Secretary*, 177 Park Street, Newton, Mass.

On April 1 the secretary's address will be, care National Research Council, 1701 Massachusetts Avenue, Washington, D. C. He is going to Washington to take active charge of the division of research extension for the Council.

Walter Adams, who is connected with the Approved Appliance Corporation, Ann Arbor, Michigan, sent the secretary recently a pamphlet describing a Universal Ray-Deflector. Apparently Walter's concern is active in perfecting new devices for the motorist.

B. R. Rickards writes from Albany, N. Y., as follows:

"Your letter of the twentieth has just reached me as I have been away for the holidays. While away I saw Gardner Barry of our Class. He is at present in the engineering division of the New York, New Haven and Hartford Railroad and lives in Boston during the winter and at Sandwich during the summer.

On the day after Christmas I went with my brother-in-law to inspect the plant of E. L. Patch Pharmaceutical Co., at Stoneham. While going through the plant I was tapped on the shoulder and turned to find Alfred Patch of our Class. For nineteen years he was professor of chemistry at the Christian College in Syria and has now returned permanently to this country and is in charge of the manufacturing department of the E. L. Patch Co., with his brother, who is general manager.

I surely will be glad to look you up the next time I am in New York."

Carroll W. Brown writes as follows:

"Last summer I had a real vacation! Took the family, wife and four children, for a motor trip to my old home in New Hampshire, going by way of Buffalo, Albany, etc., and returning by way of New York City, Harrisburg, Gettysburg, Hagerstown, Uniontown and Pittsburgh. Didn't succeed in getting in touch with any '99 men along the way, but otherwise the trip was a great success and very enjoyable."

Clancey M. Lewis, III, writes that he is stirring up all the fuss he can in behalf of foreign trade for the manufacturers of Washington and the Pacific Coast. He was one of the organization committee for the first Pacific Northwest Foreign Trade Conference attended by about three hundred delegates at Tacoma, December 15 and 16, 1921. He is coming East with Mrs. Lewis to attend the Ninth Annual National Foreign Trade Conference to be held in Philadelphia, May 10-12, 1921. He has recently been appointed Pacific Coast Representative of the American Manufacturers Foreign Credit Insurance Exchange which removes the uncertainty of foreign transactions by insuring the solvency of the foreign buyer. Lewis is also qualifying right along as a farmer with twenty-five acres under strawberries on east shore of Lake Washington and as president of the East Side National Farm Loan Association, dispensing government money to worthy farmers of his district. He reports the industrial outlook for the State of Washington for 1922 as very good.

Charles R. Greenlaw writes from Willits, California, as follows: "No use to send blanks like these to the unemployed. Find me a job next October and I will join you, if it is on the Coast here. Meanwhile, best wishes."

Hervy J. Skinner, of the firm of Skinner, Sherman & Esselen, Inc., chemists, biologists and engineers, of Boston, has been selected as Technical Adviser to the Associated Industries of Massachusetts, and will conduct the service. Mr. Skinner and his firm are regularly engaged by several of our largest member concerns, and they are recommended in the highest terms, not only by leading chemists and engineers, but by all their clients. The new department is equipped to answer inquiries on the fundamental processes employed in manufacturing operations, such as steam generation, water softening, lubrication, heating, drying of materials, filtration, distillation, evaporation, dyeing, etc. It will be able to help members with problems of construction, the properties of building materials, the selection of important types of equipment for certain operations, erection of machinery, and the like; also to direct inquiries of sources of information on technical subjects and to places where materials or equipment can be obtained to the best advantage. Further details as to the new service, and important facts bearing upon the qualifications of Mr. Skinner for the position of Technical Adviser to the Association Industries of Massachusetts, will be found in the next issue of *Industry*. The service is free to members within the same limits as the Legal, Taxation, Accounting and other services of the Association.

This looks like a live lead. Good luck to Hervy in this new venture.

Gardner Barry writes from Boston, Mass.: "Although our real home is in Sandwich yet you will kindly note the above address. I feel that 11 Joy Street will be a more permanent abiding place than any previous location here in the city and notices will reach me sooner. I meet Ralph Sand fairly often, but seldom see any other '99 men. I also see W. W. Davis, G. W. Cutting and A. B. Briggs of 1900 fairly often. Hope you are well."

Ben Hinckley writes that a few of the '99 men in Boston have endeavored to meet together at luncheon once in awhile. They had one good hour or two together at Thomas G. Plant's factory as guests of Ed Sheak. Mork, Skinner and Morse and Hinckley himself had a pleasant visit; went over the whole works and learned considerable about shoe manufacturing.

The secretary had called on George Jackson recently, and he demonstrated a new ball compass, in which he is interested. The ball compass is an improvement over the gyroscope in that the suspension is a cushion of air. A steel ball is rotated by the impact of air from a nozzle, and the ball takes a position exactly similar to the earth itself. The compass is known as the Bibbin Ball Compass, and certainly looks like a step forward in the art pertaining to this type of apparatus. Jackson is to be congratulated on connecting himself with such an interesting proposition.

From the *New Bedford Standard* we learn that:

"Amasa A. Holden, IX, is one of the applicants for the superintendency of schools in New Bedford to succeed Allen P. Keith, whose term of office ends this year. Mr. Holden is a native of Maine. He was graduated from the Massachusetts Institute of Technology, with the S. B. degree, and from Brown university, with the A. M. degree. He pursued

graduate courses in Brown, Harvard and Rhode Island Normal School. For the past three years, he has been superintendent of schools of one of the New Hampshire districts, with his office at Hillsboro. Before that he had extensive teaching experience, both as teacher and assistant superintendent. He has travelled in this country and abroad, and has lectured on travel and educational subjects."

The secretary is advised of the death of H. B. Graham and C. F. Proctor.

Norman Rood with Mrs. Rood and the children are spending several months in the South American countries combining business with pleasure.

W. B. Flynn writes from Philadelphia as follows: "Dear Mal: This reached me today at 611 Chestnut Street, Philadelphia, Pa., my present address. Electrical engineer, Day & Zimmerman since January, 1921. Resident address, 6021 Ellsworth Street, (West) Philadelphia. We have several Tech men here in the office, Bates, '92; Rowell, '93; Loeb, '06; F. Downs and D. Downs. We are very busy and it looks like a real prosperous year ahead. The old Westinghouse-Church-Kerr crowd have gradually disseminated since the 'sub' merger with Robinson but they are keeping closely in touch with each other at weekly meetings and luncheons."

Miss Henrietta Dozier, writes from Jacksonville, Fla., in reply to the publicity which we gave to her in the last issue as follows: "Dear Mr. Corse: I had no idea that I was going before the public in print or I would have been more careful of my 'lanuage.' I would not have sassed Mr. Browning on such short notice. The real news, though, is that there are enough Tech men in Florida to form a Tech Club and we have done it. Mr. Breth at Gainesville, University of Florida, was the instigator. It is too new to have created any further news but, if we do anything worthy of note, will advise you. Good old Tech! She seems to have stretched out her arms and gathered in her children from all over the earth. *A propos* of this glance over the last directory of students. Where are all the men in our Class, anyway?—Henrietta C. Dozier.

"P. S. This makes me think of a joke. Some one once asked a man to ask his wife to sing. 'I will,' he replied, 'if you will ask her to stop.'—It is your fault, you started a woman, so it is up to you. Do you remember how you men used to call me old Hen Dozier? Shame! Life in the 'old Hen,' still."

The personal touch of this news is one hundred per cent. If more of our classmates were to follow Miss Dozier's lead, we would have a real live issue. The medal for "live news" goes to her this issue.

It is rumored — and we fear the rumor is true — that E. Sutermeister, M. I. T., '99, is to talk to the students taking the short course in Pulp and Paper Manufacture at the New York State College of Forestry, Syracuse, N. Y. The circus starts 10 a.m., March 27! Heaven help the poor guys who have to listen to him, but thank the Lord he doesn't stutter!

George H. Priest writes from Brockton, Mass., as follows:

"Yes, we do all of the things you mention in the 'old wail.' Sometimes we even get up early. For instance, they say there's nothing new under the sun, but we found a new one the other night, so the old saw doesn't apply to gas. Our slumbers were rudely awakened at two a.m. by frantic reports of tremendous gas leak. Central registered two hundred and fifty complaints in one hundred and twenty-five minutes. Fire department, police, mayor, board of health, and 'steen thousand citizens all tearing 'round in hopeless dismay, expecting momentarily to be shot into eternity.

Cause: Person or persons unknown had opened three inch valve two turns allowing a few barrels of volatile holder oil to escape on to the ground. Consisting of benzol, toluol and solvent naphtha, saturated with gas and sulphur, it just naturally 'smelled.' Running through a drain into the town river whence a gentle south wind diffused it all over the city, the confounded stuff gave Brockton the worst 'gas attack' in its history. Sequel, law suits. Query: How many? How's this?"

H. H. Starr, writes from Philadelphia, Pa., as follows:

"Things go along in about the same old rut all of the time, with nothing eventful. 'Bill,' the boy, has a new cold or else has had a fight at school to liven up home life; and at the office there is planning how to take down some old bridge and how to put up the new one. Then get the work started and follow it through. Only trouble, there are not enough of them being renewed just now."

"Watkins & Huse are going to shake a leg and go to the 'Mystery' dinner of the Technology Club of Chicago. Only two bucks and look what you get — oh boy! Will

advise later if we get a prize for being late or early or at the end of the line or something — the rest of the '99 bunch is asleep or dead or something except Page and Towle — am enclosing latest news on dinner — so don't say yours truly didn't do his part. Best wishes 'Corse' old top. — Frederick A. Watkins."

Arthur B. Foote, writes from Grass Valley, California, as follows:

"I am still with the North Star Mines Co., at present as general manager. Everyone seems to think that mining for gold is an easy way to make money, but it takes a rich mine to pay its way since the purchasing power of gold has declined to about one-half of what it was.

This mine is ideally located on the western slope of the Sierra Nevadas at an altitude of 2,400 feet. There is an occasional snowstorm in winter, but the snow never stays long, and only once since I have been here has there been skating. A few miles farther up the mountains it snows all winter, sometimes piles up to a depth of 20 feet or more. Frequently the roads across the mountains are not open until well along in June, when we are picking cherries and going in swimming."

1900

GEORGE CROCKER GIBBS, *Secretary*, 25 South Street, New York, New York

The secretary has read with much interest and not a little secret envy, the very bright and snappy manner in which the secretary of the Class of 1901 sets forth his material. He fears that he can never attain the latter's excellence. An incident occurred during this secretary's Junior Year, which also sticks in his mind — he was slated for the same part; that of the "Private Secretary" in that play of the same name, given by the Walker Club; with the secretary of the Class of 1901 — it is needless to say who failed.

It is with mixed feelings that the secretary records that John Randolph Brownell, formerly 1900, now is rated as of 1901. We wish him the best of luck with '01, but why deprive the Class of 1900 of his light? Brownell has lately removed from San Francisco, Cal., to New York City, with his family. He is at 120 Broadway, as manager, Group Insurance Department, Equitable Life Insurance Company, of New York.

The alumni of Technology of New York held their annual dinner (after a lapse of several years), on Wednesday evening, February 8, at the McAlpin Hotel, under the auspices of the Technology Club of New York. The secretary summoned forty or more available men in the vicinity of New York, to represent the Class. Unfortunately not many could respond. There were present: Blair, Chalmers, Price, Thayer and Gibbs. The balance of the places at the table was shared by members of the Class of '01. The Class representatives were embarrassed. We had at M. I. T., a Class Yell, but no one has the courage to use it now-a-days. Query: Is it too late now to formulate a new yell for our twenty-fifth reunion?

At the annual dinner, in Boston, Bowditch writes as follows: "The following men were present, Fitch, J. B. Conant, Jennings, Graff, Jackson, Reardon, Cutting, Neall and myself. I do not think that the dinner was as good as some we have had, although the music was very pleasant and the food good. The hall was not filled, and we were way off in the corner and it was rather difficult to hear the speakers."

The secretary made a trip to Buffalo, Cleveland and Detroit. He sent letters ahead to 1900 men in all their cities. The response was small but proved interesting. Many of the addresses of the men in these cities are not correct in the Register. Van Merrick, '00, is associated with Frank R. Walker, '00, architect in Cleveland. Van Merrick was just leaving town but gave the secretary the privileges of the University Club. In Detroit, the secretary had lunch twice with Chaffee, '00, and enjoyed many reminiscences of Tech life. Chaffee is going to send some memoirs soon to this column on the old 1900 Base Ball Team.

The following several items of news have been received from various sources. We offer our congratulations in each case.

From *Iron Age*, New York City, January 26, 1922: "Kenneth Seaver, who has been identified with the Harbison-Walker Refractories Co., Pittsburgh, for the past nineteen years, latterly in the capacity of assistant general manager of sales, has been promoted

to the position of general manager of sales, succeeding Judd J. Brooks, Jr., who has been appointed to the position of assistant to the president. Mr. Seaver graduated from the Massachusetts Institute of Technology, with the degree of civil engineer, and before joining the Harbison-Walker Co., was with the Pennsylvania and Baltimore & Ohio Railroads, and also for a short time with the American Bridge Co."

New Item, Poughkeepsie, N. Y., February, 1922: "Rawson Collier, a graduate of the University of Virginia and the Massachusetts Institute of Technology and a native of Atlanta, has taken up his duties as sales manager of the Central Hudson Gas and Electric Co., succeeding the late Leon H. Scherk. Mr. Collier is married and has three children. He made a record in his profession by starting as a draftsman in the office of the Georgia Railway and Power Co., and progressing to the post of sales manager within fifteen years. He was a member of Rotary in Atlanta."

Bowditch writes that Cutter has been elected treasurer of the Town of Weston, Mass.

Draper sends the following announcement. "Draper & Co., Inc., announce their organization as a Massachusetts Corporation to deal in all kinds of grease and scoured wools, both domestic and foreign, also in tops, noils, mohair, wool waste and similar merchandise. Their office will be located at 281 Sumner Street, Boston, Mass., in the building hitherto occupied exclusively by Crimmins & Peirce Co. Draper is treasurer."

Gibbs wrote to Jouett regarding the alumni dinner in New York, and had the following reply: "My dear Gibbs: Your notice regarding the dinner has been received. I regret that I will be unable to attend as I am now located in Cleveland, Ohio, having recently moved here to take charge of the design and construction of a new union passenger terminal for the New York Central, Big 4 and Nickel Plate, on the preliminary work of which I have been working for the past two years. It is a good-sized job, involving a good many millions of dollars, and I expect to stay here for some time. My address is Chief Engineer, Cleveland Union Terminals Co., 323 Lakeside Avenue N. W., Cleveland, Ohio, and my home address is 13617 Drexmore Road, Cleveland. I recently met here one of our former classmates, Fred Smith, who came to Tech from Johns Hopkins. He is in the general contracting business here and is fitting up our offices. Best regards to yourself and any 1900 men you may see."

Mr. Albert C. Dart, '00, has been in Vocational Rehabilitation section of the United States Veterans' Bureau since last March. He went in as a supervisor of training, being assigned men in the School of Estimating at the Colorado School of Mines, the Wolcott Conservatory of Music and the Denver Academy of Allied Arts; incidentally he reports that he got away with the last two very successfully. After six months in the Denver local office he was boosted to District Office No. 11 in charge of institutional trade and engineering training furnished to the men. This was a job paying moderate wages during hard times and gave valuable experience, but there is no particular future in it. His family still remains fixed with a wife and two daughters.

Morgan Barney informed Gibbs that he was the proud father of a son, Peter Barney, born Sunday, February 12, 1922.

Fitch reminds the secretary that we should "not forget that we owe to Bowditch a debt of gratitude for his long continued and conscientious work in behalf of our Class."—The secretary hopes we do not forget it, and its a debt that can't be repaid, except by loyalty to the Class for what "Inky" has done to keep it together.—"Deflation in Relation to Cost Accounting" is the title of an address delivered by Fitch at the Sixth Annual Meeting of the Associated Industries. The address is also printed in *Industry*, under date of December 3, 1921.

Jack Porter sends us an interesting write up of his life in New Orleans, which follows here: "*My dear George*: When you asked me to give a sketch of myself and of the work here in which I have a part, it seemed a very easy task, but as I look back over the years since leaving Tech and review the development of the improvements in this city, civic and sanitary, it seems beyond the scope of a Class letter to do it justice. The merest outline of those portions of the city's improvements with which I have been connected will be all that I can hope to cover. Shortly after graduation, I went to work for the Continental Filter Co., of New York and was engaged for about four months in investigating the process of the Quincy, Ill., Water Works, in the use of Lime and Iron in Water Purification. On my return from there in November, 1900, I was offered a position at New Orleans, on the Water Purification Investigation to be conducted by the Sewerage and Water Board, under the direction of Prof. R. S. Weston. At the close of these investigations in

1901, I decided to stay on as the work outlined by the Sewerage and Water Board, in the way of sanitary improvements appealed strongly to me.

I am still here after twenty-one years of service with this department. I have filled various positions in the board's service, and have had a part in most of the work which has been done here to make New Orleans as safe and pleasant a city to live in as any in the country. I married late in 1904 and have five children, ranging in age from four to sixteen.

One has only to consider the reputation of New Orleans as a health resort prior to about 1900, and to examine the mortality statistics from 1880 to 1920, to see the result of sanitation in its broadest aspects. New Orleans has expended about thirty-two million dollars in her three great systems of drainage, sewerage and water supply, and is spending at the present time about two million dollars annually in extensions to these systems. With an average annual rainfall of about fifty-four inches on a nearly level city, entirely surrounded by levees, with individual storms of great intensity, the problem of removal of storm water is of considerable magnitude. Eight drainage stations containing an aggregate pumping capacity of over seven billion gallons of water in twenty-four hours — some of the units of which can pump seven hundred cubic feet per second — have been built and are in regular operation. These stations are served by a storm water collecting system of canals and laterals, some of which are masonry and of over two hundred square feet area. The sewerage system includes three main pumping stations for forcing the sewerage into the river and eight automatic relifting stations. The water system is modern in every respect and includes two pumping stations and two water purification plants having an aggregate nominal capacity of forty-four million gallons daily. Due to various causes the year just closed has shown an average daily consumption of water of about this amount and has called for the frequent operation of these plants at well above their rated capacity. Plans are well under way for the early increase in capacity of these stations to take care of the future growth and provide a margin of reserve capacity. The part that the above improvements have played in making 'The City that care forgot' one of the healthiest cities as well, cannot be gainsaid."

A letter sent to George F. Fiffiany, Barnett Building, Jacksonville, Fla., has been returned. Can any one, or the original himself, supply the right address.

ADDRESS CHANGES

George O. Adams, Experiment Station, Lawrence, Mass.; Cyrus V. Dart, 1750 Grant Avenue, Davenport, Iowa; Frank Emerson, Hewitt and Emerson, 100 Glen Oak Avenue, Peoria, Ill.; James T. Harahan, Jr., 3358 Michigan Avenue, Chicago, Ill.; James C. Heckman, Cheney Silk Mills, 89 Sargent Street, Newton, Mass.; Garabed G. Heghinian, 262 Fulton Street, Brooklyn, N. Y.; Benjamin R. Johnson, 34 Pine Street, New York, N. Y.; Henry D. Jouett, 13617 Drexmore Road, Cleveland, Ohio; Charles A. Leary, 6 Beacon Street, Boston, Mass.; Charles V. Merrick, 2549 Kenilworth Road, Cleveland Heights, Ohio; Harry E. Osgood, 185 Devonshire Street, Botton, Mass.; Myron P. Potter, Watson Engineering Co., 4614 Prospect Street, Cleveland, Ohio; Harry N. Thayer, American Cotton Oil Co., 65 Broadway, New York, N. Y.; William H. Fulton, 684 Stuyvestant Avenue, Irvington, N. J.; Fred B. Wilder, Dennie Apartments, Long Beach, Calif.; Fred L. Townley, Box 166, Cincinnati, Ohio; Warren W. Sanders, Pennington Road, Trenton, N. J.; William A. Kingham, 29 Arch Street, Framingham, Mass.; Gerard Frink, Washington Iron Works, Seattle, Wash.; Elbert G. Allen, Philadelphia Rapid Transit Co., 1520 Spruce Street, Philadelphia, Pa.

1901

A. W. ROWE, *Secretary*, 295 Commonwealth Avenue, Boston, Mass.

One by one they filter through. Honest merit cannot be concealed. With this introduction it is with keen pleasure that your secretary informs you that W. Fred Davidson is now appraisal engineer with the United States Shipping Board, Emergency Fleet Corporation in the Philadelphia District.

Henry Marcus, too, has come to life after lo, these many years. Marcus is now in the refrigerating machine business. Writes that he controls several valuable patents for refrigerating devices, adds that he has the same old beard and a very few gray hairs —

site not designated — and a stamp collection, this latter, naturally, warming to the heart of the secretary, a brother philatelist. Marcus sends greetings to the Class and would be glad to hear from any one passing through San Francisco.

Al Higgins writes from Chicago with association in several companies. He brings indirect word of both Harley Kennedy and Freddie Colburn.

A clipping from Romeike, under the caption of "Brush Addresses Tech Faculty," is here cited to refute an implied libel. Matt is quoted as saying, "Engineers with executive ability is what this country is sorely in need today." No product of the English Department at Technology in the halcyon days of Arlo Bates could be guilty of such a grammatical infelicity.

Perk Parrock is wandering around this countryside, and your secretary has received from him some very pleasant communications. It is with regret that we note that endeavor outruns performance, as early in February a personal visit was promised, while the Ides of March have come and gone without fulfillment. The invitation still holds good, however, and your secretary has the greatest hopes for what the future may hold.

From Fred Clapp has come a most interesting reprint of an article on the Hwang Ho, reprinted from the *Geographical Review*. The glib fluency with which Freddie handles the polysyllabic and entirely unphonetic words of some one of China's many dialects bespeaks a most praiseworthy erudition. Your secretary, harking back through the misty years to the days of his innocent childhood, vaguely remembers that in that long-ago epoch the river was the Hoang Ho, a lilting cadence, but he presumes this has become outmoded with the march of civilization. Incidentally, it is a highly readable article, with a very judicious selection of half-tone reproductions adding to the interest of the article. Your secretary could wish that more members of the Class, many of whom are carried in the course of their professional work to the far corners of the globe, would make some such permanent record of interesting travel as Clapp has done in this most readable article.

Before the REVIEW goes to press again the festive month of June will have come and gone. It is in the mind of your secretary, remembering the most pleasant gathering which the stalwarts of the Class enjoyed early last summer, to inquire in this efficient and inexpensive way how many of the men would like to have a modest outing at about commencement time? Arrangements could be made at any one of several country clubs for a charge of approximately \$8 per day to cover lodging and subsistence. Golf charges, tennis, etc., would be additional and optional. If any of the members of the Class of '01 are interested in such a modest and inexpensive program a kind word to the secretary to that effect would be a sufficient stimulus to produce more definite information. Gentlemen, I pause for a reply.

From the alumni office a surprisingly large number of changes of address have appeared. Whether this results from a failure on the part of the members of the Class to pay their rent or whether the industrial demand for them is a continuous and active one your secretary is unable to say. Living as he does a life of cloistered and celibate seclusion he finds it impossible to estimate the situation fairly. The address changes, however, are given you as they come to him, and from your personal knowledge of the individuals involved, you can best estimate the genesis of their exodus in such numbers:

Francis K. Baxter, Jr., care West Coast Oil Co., R.F.D. No. 2, Fullerton, Calif.; F. Ward Coburn, 527 West Sixth Street, Erie, Pa.; Philip L. Crittenden, 385 Irving Place, Milwaukee, Wis.; George I. Cross, Box 336, Camp Benning, Ga.; Walter M. Curtis, 26 Gikon Street, Leominster, Mass.; Miss Emma E. Ferris, 15 Hovey Street, Newton 58, Mass.; Frederic W. Freeman, 336 Danforth Street, Portland, Me.; Albert L. Galusha, 35 Hillcrest Road, Caldwell, N. J.; Clifford R. Hammon, care Cutler Hammer Mfg. Co., Milwaukee, Wis.; Albert W. Higgins, 919 Argyle Street, Chicago, Ill.; Horace Johnson, G. Brewer & Co., Honolulu, Oahu, T. H.; Angus A. McInnes, 241 East 14th Street, New York, N. Y.; Harry P. Parrock, Hopedale, Mass.; Langdon Pearce, P. O. Box 151, Winnetka, Ill.; Ralph H. Stearns, 8 West 40th Street, Room 1207, New York, N. Y.; Prof. William J. Sweetser, 109 Main Street, Orono, Me.; Com. Ralph Whitman, United States Naval Ordnance Plant, South Charleston, W. Va.; Roger W. Wight, care Queen Insurance Co., 704 Granite Building, Rochester, N. Y.

1902

FREDERICK H. HUNTER, *Secretary*, Box 11, Boston 32, Mass.BURTON G. PHILBRICK, *Assistant Secretary*, 248 Boylston Street, Boston, Mass.

The twentieth reunion of the Class will be held at the Riversea Club, Fenwick (Old Saybrook), Conn., on June 15-18. Parties will go by auto from both New York and Boston, starting Thursday forenoon and reaching Riversea in time for dinner. Notice giving more detail will reach classmates before this issue of the REVIEW. Any Tech man who was associated with 1902, although he may be officially a member of a Class earlier or later, will be heartily welcomed, and details will be sent to any such men on application to the Class secretary. Replies already received indicate an attendance of fifty as assured, sixty as probable, and a still larger number as quite possible.

At the Alumni banquet, held in Walker Memorial, Cambridge, on January 7, a table was reserved for the classes of '01 to '05 inclusive. The '02 attendance was not what it should have been, inasmuch as we lacked by two men of having as many there as the other four classes combined. Those present were Basset, Fitch, Hunter, Kellogg, Moore, Patch, Burt Philbrick, Ritchie, Robinson and Walker.

The following addresses have come to hand since the last issue of the REVIEW: Walter Lorrain Cook, 2310 Ashmead Place, Washington, D. C.; William N. Brown, 448 Highland Avenue, Lakewood, Ohio; "Dimmy" Bartlett, 459 South Rita Avenue, Huntington Park, Calif.; John R. Marvin, 78 Plainfield Street, Waban, Mass.; James H. Brown, 305 East Montevista Apartments, Philadelphia, Pa.; George A. Worden, 107 Bass Avenue, Gloucester, Mass.; John W. Wadleigh, U. S. S. Columbia, care Postmaster, New York.

James Driscoll is with the Johns Manville Co. of Manville, N. J.; Arthur Nelson has organized the Beacon Construction Company with offices at 15 Beacon Street, Boston. This firm has just been awarded the contract for a fireproof schoolhouse for the City of Boston, near the Brookline line, and has other construction work under way.—Arthur P. Hall was elected president of the New England Association of Dyers and Cleansers at their annual convention in Boston, last January.—Lewis Moore has resigned his position as bridge engineer for the Public Service Commission in the State of Massachusetts, and has hung out his "shingle" at 1149 Tremont Building, Boston, Mass., as a consulting engineer for bridge and structural work. He reports several bridge commissions which have kept him out of mischief since he made the change last fall.—Gardner Rogers has removed from Blackstone, Mass., to 231 Main Street, Pawtucket, R. I. He is still with the Blackstone Valley Electric Co., but has moved down the valley so that he will be nearer to his classmate E. E. Nelson.

With deep regret we chronicle the death of James Duane Ireland, on Tuesday, December 6, 1921. Ireland is warmly remembered by those men who worked with him during our last two years, he having come to Tech as a graduate of Yale. The following is taken from notices of his death in the *Skills Mining Review* and *Mining and Metallurgy*.

"James Duane Ireland died on December 6, 1921, at Cleveland, Ohio, after an illness of several months. He was forty-three years old. Mr. Ireland was graduated from Yale in 1900, and received degrees in Mining and Mechanical Engineering in 1902 and 1903 at the Massachusetts Institute of Technology. His activities in the mining field commenced immediately after this. He was employed at the Camp Bird mine in Colorado, then spent a few years prospecting in Arizona, Southern California and Northern Mexico. In 1907 he became mining engineer for M. A. Hanna & Co. of Cleveland, Ohio, and took up his duties on the Mesaba and Michigan Ranges.

In 1908, Mr. Ireland was appointed general manager of the iron-ore properties of this company, and opened offices in the Sellwood Building, Duluth, Minn. He continued in this capacity until 1917, when he was made a member of the firm and left for Cleveland. Under Mr. Ireland's managership a number of original ideas were successfully developed, among which can be classed: 1. Drying iron ores before shipment from the mines, as a means of rendering commercial a number of ores, which on account of excessive moisture are not merchantable. The first plant for this purpose, an experimental one, was built in 1909 at the old Hollister mines near Crystal Falls, Mich., and was followed by large plants built at the Brunt mine near Mountain Iron, Minn., and at the Wakefield mine, Wakefield, Mich. 2. The first mill in the Lake Superior region using jigs for the concentration of branded ores. This mill was built in 1911 at the American mine, near

Ishpeming, Mich. 3. The method of stripping on the Mesaba Range by means of a large revolving dragline machine, in such a way as to overcast the spoil from the first cut and then recast this material to make room for depositing the spoil from a second cut, all this being accomplished without the use of locomotives and dump cars. 4. The use of the first electric shovel on the Mesaba Range. Mr. Ireland was among the first to recognize the advantages of using electrical apparatus at the iron-ore mines in the Lake Superior region, and to adopt a policy of complete electrification.

After Mr. Ireland moved to Cleveland, he was elected vice-president in charge of the operation of the Susquehanna Collieries Co., which constituted the company's holdings in the anthracite region. Under his direction a complete rehabilitation was undertaken which involved electrification of 14 collieries, with the construction of three central-power stations, each having a capacity of 15,000 kw. and one of 2,000 kw.; the sinking of new shafts, and building new breakers as a means of eliminating old and inefficient ones and in some cases concentrating a number of collieries into one breaker with the same object in view. This work was started in 1918 and a large part had been completed at the time of his death. It should be mentioned that the boilers in the power stations referred to are fired with pulverized slush, which is a waste product from the breakers, and constitutes the first use of pulverized anthracite coal under boilers. From a mining standpoint, the thing which made Mr. Ireland rank without any superiors was the combination of an exceptionally brilliant engineering ability with a very keen understanding of finance and business conditions. His qualifications as an engineer were remarkable, as he was not only an expert geologist and mining engineer, but with that he was exceptionally capable in mechanical and electrical engineering. He was therefore always in a position to view a project from every angle and not a single point would come up for discussion that he could not immediately take up and settle as an authority on that particular subject. It was undoubtedly his great knowledge of the various phases of the business which made him very keen on details, and even with the great amount of responsibility and work which became incumbent upon him from his position, yet he never would accept figures or statements of a general character without having them backed up by detailed explanations. His capacity for work was phenomenal, and not only was work his essential pursuit in life, but in fact was his hobby. Time had very little meaning for him, and he would devote day and night continuously to the study and solving of problems. With all this he was one of the most considerate and courteous men that ever breathed the breath of life, and invariably his first thoughts were for the other person's feelings. This magnificent trait always showed itself whether in business or personal relations. His reputation for square dealing was widely known, and his word was as good as his bond. In this respect he was always insistent that every one in his employ act accordingly, and his motto was always 'do the right thing no matter how much it may hurt.' The natural result of such a character was the undying devotion and loyalty of every one in his employ, and he was always looked up to not only as the 'chief official,' but also as a kind friend and adviser to all. It was universally known that it made no difference where he was or how busy he might be, he could always be approached by any member of his organization on any matter or with any suggestion, and gain his individual attention, together with his advice and encouragement. He always had a word of praise for any accomplishment however trivial, and it was these wonderful qualities in his character which brought out the best in the men of his organization, and turned failure to success in a number of undertakings. His undaunted courage and consideration for others was shown to the very end, and during his entire illness never for a moment did he show the slightest sign of giving up, or ever utter a single word of complaint despite the fact of his terrible suffering.

He leaves a widow, Elizabeth Clark Ring Ireland, and one son, James Duane Ireland, Jr., eight years of age."

1903

E. J. RUXTON, *Secretary*, 92 Marengo Park, Springfield, Mass.

No report from the secretary.

Dr. Richard C. Tolman, X, is director of the Fixed Nitrogen Research Laboratory, now an independent unit of the Department of Agriculture. Dr. Tolman has the assist-

ance of an advisory committee made up of a representative of the War Department and representatives of the agricultural bureaus which are directly interested in the fixation of nitrogen.

Myron H. Clark sent the following:

At the alumni dinner given by the Technology Club of New York on Wednesday evening, February 8, at the Hotel McAlpin, the following '03 men were present: Noel Chamberlin, Myron H. Clark, Hewitt Crosby, G. M. Harris, S. Skowronski.

1904

HENRY W. STEVENS, *Secretary*, 12 Garrison Street, Chestnut Hill, Mass.

AMASA M. HOLCOMBE, *Assistant Secretary*, 3305 18th Street, N. W., Washington, D. C.

Classnotes for this issue are not very numerous, but what there are, contain much interest. The letter, long predicted and awaited, from Selskar Gunn arrived at last and is published in full.

"*My Dear Stevie*: Please do not have heart failure in receiving a letter from me.—However, my intentions have always been good, even if the flesh has been weak. I never adequately acknowledged the letter which was sent to me by the fellows who were present at the 1904 Class reunion held last year. It certainly was a pleasant thought and I am glad to say that my stay in the Adirondacks did me a lot of good and I have since enjoyed good health. I came to Prague in October, 1920, as the representative of International Health Board of the Rockefeller Foundation and I am attached to the Ministry of Health of Czecho Slovakia in an advisory capacity. I wonder if you could tell accurately where Czecho Slovakia is? This country is located in the heart of Europe and is, in my opinion, the best bet in this part of the world. Since my arrival the improvement has been very great, but this is a mere coincidence and I do not take the credit for it! My family is with me and we are pleasantly located. My work occasionally takes me into surrounding countries and I have visited Poland, Austria and Hungary in the interests of the Rockefeller Foundation. The Rockefeller Foundation has made a gift to the Czecho-Slovak government of approximately twenty-seven million crowns for the purpose of assisting in the creation of a National Institute of Hygiene and we hope that building operations will commence in the spring. We have also granted twenty-one scholarships for young Czecho-Slovak physicians, engineers and chemists for a year's study in the United States. We hope that in course of a few years this Republic will have a very strong public health department. My own plans for the future are not made, although I hope to return to the States in the fall of 1922. Please give my best wishes to any classmates whom you may meet. Very sincerely yours, *Selskar M. Gunn*."

Another item of news concerns one of our classmates of whom we have heard little in these columns. Paul Paine, XII, is now making his headquarters in Los Angeles. He finds that this year he will be unable to come to Tech to deliver special lectures as usual. Last May he was engaged in a consulting capacity by one of the large oil companies and in August went to England as advisor to the American Delegation that was concerned with the negotiations with foreign interests and did not return until November. While negotiations were completed there have been a great many details to be worked out which will keep Paine there for several months to come and he cannot do his Cambridge work much to his regret.

John W. Shaw is now located at Annapolis Royal, Nova Scotia. For ten years, from 1909 to 1919, he was managing the Casey-Cobalt mine in the Cobalt District of Ontario. He next spent about a year examining properties in British Columbia for the Mining Corporation, part of the time being spent near Bridge River about one hundred miles north of Vancouver and part of the time near Nelson. Since 1920 he has been more or less of a free lance. Just now he is interested in a barytes property in Cape Breton which looks so promising that he is planning to make a trip to England shortly in connection with its promotion.

Plans for the annual reunion to be held in June, are under way and detailed announcements will be mailed as soon as arrangements are completed.

1905

ROSSELL DAVIS, *Secretary*, 19 Thorndike Street, Beverly, Mass.

Mr. and Mrs. Walter Leveridge announced the marriage of their daughter, Ruth Lucy, to Fred Warren Goldthwait on March 20. Fred and his bride will be at home after July 1 at 18 Sherman Road, Melrose, Mass.

The President of the University of Montana writes: "*Dear Grove*: I have been busy trying to get into the ropes of my new job. In spite of a few scars, received during the awarding of contracts for a million dollars' worth of building, and my pessimism over the oil situation in Montana, I am still here. We are particularly pleased to announce the arrival of Miss Prudence on January 31. That gives us three of each kind. How is that for the largest '05 family? But really isn't "Prudence" inappropriate for the sixth? — CHARLIE CLAPP." (It's a record, Charles.)

H. R. Robbins is living up to his reputation as a globe-trotter. He writes: "I have recently joined the technical staff of the American Cyanamid Co., 511 Fifth Avenue, New York, and expect to sail in a few weeks for Johannesburg, South Africa, which is to be my permanent headquarters. My activities will be extended in the direction of promoting the use of Aero Brand Cyanide, made at Niagara Falls from atmospheric nitrogen, among the gold and silver mines of South Africa, Rhodesia, India, Australasia, etc."

Jules Barnd writes from Toledo: "Just returned from a trip to Nevada, and find your card. At present I am president and general manager of the Consolidated Spanish Belt Silver Mining Co. Have just finished construction of a fifty-ton mill and placed in operation. However, on February 1 we got snowed in with seven feet of snow, and operations have been suspended until April when I again take charge."

George Jones comments on a card announcing a rearrangement in the firm of Sheridan, Jones & Sheridan (consisting of Thomas F. and Thomas H. Sheridan in addition to "Our George"), that he is still "pursuing the law" at a respectful distance, at Marquette Building, Chicago, Ill. (patent varieties preferred).

Gib Tower writes from far-off Balboa to acknowledge a circular letter. (We aren't quite sure which one, there having been so many, and the Canal Zone being so far away, and all, but it was good to hear from Gib.)

"*My dear Grove and Charlie Hawkes*: Your circular letter was a prize winner. For the last two years, since leaving the Navy, I have been located at Balboa on the Canal Zone as mechanical engineer of the Panama Canal. The work has been to supervise the various office activities of the Mechanical Division which has a group of shops similar to a navy yard. Up to a few months ago we had been employing between two thousand and three thousand men on all kinds of repair work, mainly on ships transiting the Canal, but now conditions are much depressed.

Any one who still thinks of the Canal Zone as a dangerous place should know that it is very delightful to live in. It is not unhealthy not uncomfortably hot, simply summer all the time. Except for its tropical setting life here on the zone is about as in the States, although across the line in Panama everything is much different. Of course all the kinds of bugs, animals, fish, birds and trees which are common to the tropics flourish here. Ants, spiders and cockroaches are abundant and grow to astonishing size. Several kinds of lizards, large and small, are common. Every month or two some one kills a boa constrictor which has been stealing chickens or otherwise misbehaving. They are comparatively harmless. One can see monkeys and parrots and Indians if he cares to go into the jungle and run the risk of catching malaria. Little green parakeets are almost as common as sparrows are in the States. Strange to say, one seldom sees a mosquito in the Canal Zone, and there are practically no flies.

Balboa is almost like a park, with its palms and many kinds of flowering trees. Bananas are sold for six cents per dozen, and forty to fifty cents per bunch. Good oranges are one cent apiece in season. We have coconut trees back of the house. Domestic service is very cheap and plentiful. The tropics are interesting and pleasant for a few years, but after a while one comes to appreciate the advantage of living in a climate which is variable and stimulating. *Gib Tower.*"

Then comes George Thomas, to prove that the REVIEW is really read, in a letter with a kick in it — and not a half of one per cent kick, either — which is to be expected from a fellow who could tell a story like that about the cow who jumped a fence to butt his machine and then jumped back, and get away with it, too:

"*Dear Marcy*: Shades of M. I. T.! what sort of rank heresy will next invade the institution across the Charles? Ever since the Bolsheviki chased me out of Russia in 1917 I have tried to maintain my dignity by remaining silent. This last number of the *REVIEW*, however, is too much. I feel that I must raise the one-fingered voice of my rusty, dusty, trusty Corona in objection. I knew that no good would come to Tech in Cambridge.

On page 36 of the January *REVIEW* I find the following: 'Less than One in Twenty Win H.' In the name of all that is dear to any of us, why should any Tech man want to win an H? If, as I suppose, the faculty desired to add another mark to indicate especially good work on the part of a student, why on earth could they not have selected some other letter? To me H has always indicated one of two things or institutions. Either a place where young and undesirable young men are sent while they are living or a place where the same men and possibly a few others are sent when they are dead. If a mark higher than the good old C is desired, why not pick out a letter that any Tech man could and would be proud of? I hereby suggest that the Class of '05 protest the use of the hated H and insist upon the substitution of the glorious T in its place.

As if the above was not enough, I find among the '04 notes that our Gunny sent Christmas greeting to the Class of 1904. Gunny entered with the Class of '04, to be sure, but he could hardly be blamed for that. As soon as he really had time to find out what kind of a bunch he was mixed up with, he changed to '05 and graduated with us. Gunny ought to be disciplined. It is recorded in history that the Class of '05 proved on at least two occasions that we were the mental and physical supervisors of '04. Further than this, Gunny roomed with the notorious 'Volts' Ovington in the same house that I lived in on Concord Square, and I did him enough favors to expect that he would forget any feeling he might ever have had for '04. Gunny used to receive his allowance from home quarterly and he always spent it promptly if not wisely. As soon as Gunny received his draft Gunny would start eating at the down-town hotels. This would continue for about a month and during the second month he would live about as the rest of us did. By the end of the second month Gunny would be broke, and he would then start borrowing thirty cents daily from me, and exist on beans and coffee three times a day until the next draft came. He would then pay me up and start the cycle all over again. When I think of the bushels of beans and barrels of coffee I staked Gunny to, and then realize that he sent Christmas greeting to '04, it makes me sad indeed to reflect upon his ingratitude. Perhaps, after all, he belongs to '04.

There is not a single bit of news that I could tell you about myself. I have the same wife, the same children, the same job, the same home, the same automobile and even the same dog that I had three years ago. I will admit that I have not as much hair and that my cellar is not as wet as it was then. I am busy, and hope to continue to be busy. I get to Chicago, St. Louis and several other cities about once a month, and then come home and start on another round. I note that a number of the Alumni Associations in the cities that I visit have weekly luncheons, and I suppose I ought to make an effort to visit some of them. I have tried to make myself think I did not have the time but I imagine the real reason is that I am too lazy. Yours in '05, *G. C. Thomas.*

George W. Scott is plant engineer of the Franklin Automobile Company; address, H. H. Franklin Manufacturing Co., Syracuse, N. Y.

Bertrand L. Johnson appears as co-author with Adolph Knopf of an exhaustive-looking treatise entitled "Tin in 1919," issued by the Geological Survey. The trouble with "B. L." is that he restricts his audience by his title. If he had only told us about the prospects of tin in 1922, he would have us all eager, instead of starting vain regrets about "where is the tin of yesteryear?"

On March 3, Andy Fisher, the efficient chairman of our Stunt Committee, staged an enthusiastic luncheon at the City Club, the principal object being to get up excitement for our party on March 18, seventeen men were present, and we were about through the soup when a familiar red head appeared in the doorway, and John Glidden, back for a short while from Peru, entered. He had just happened in and saw the notice of an M. I. T. '05 meeting. He expected to be up again from New York for the dinner on the eighteenth, so escaped without giving much news of himself. The discussion was largely as to whether the dinner should be a ladies' event, or for men only. Opinion swayed, but finally Strickland and Boggs were added to the committee, and the matter left for them to decide. The committee felt that an event to which the ladies could be invited would be pleasanter

later in the season, when it could include outdoor features, so notices for a dinner and bowling party, men only, at the Walker Memorial, on Saturday evening, March 18, were sent out.

On March 18 the following men showed up: Adams, Armstrong, Babcock, Balkam, Boggs, Buff, Crowell, Coffin, Davis, Eichler, Fisher, Green, Hawkes, Keith, Kenway, Lewis, Marcy, Prescott, Steel, Strickland, Tebbetts and Wentworth. L. U. Fuller, who had heard of the previously discussed plans for a ladies' night, and whose subsequent notice had unfortunately gone astray, showed up with Mrs. Fuller, but could not be prevailed upon to stay, and it was only the ex-secretaries' luck in being a few minutes later in arriving that averted murder, according to those present. (The ex-assistant-secretary said fervently a little later, "Thank heaven, some one else will have to explain why notices don't arrive, after this!")

A good dinner was had by all, and then the fun began. Zeke Coffin cleared one end of the room, and in the most approved "Oyez, Oyez" manner, announced the entry of the Court. Hub Kenway mounted the bench, and could not have been more natural if he had worn a wig. He asked for the docket, and Attorney-General Ros Davis appeared before the Court, citing the ex-secretary for "Mal-feasance, Mis-feasance and Non-feasance in Office." The defendant was represented by Senator Bill Green (who as an attorney is a darned good chemist.) The attorney-general was no respecter of witnesses in his efforts to prove the guilt of the accused. He examined Doc Lewis on his fitness to be a professor, on whether he wore B. V. D.'s or Filter Papers and other things, and the counsel for the defense was not more kind. But he got his when the Court examined him on his ability to represent the accused. It was a terrible slaughter of witnesses, many of whom were called but few were chosen. The assistant secretary was put upon the stand in his own defense, but it availed him nothing. The secretary the same, and it availed him less than nothing. (Ros had a beautiful spiel, and rivaled his Tech Show patter, but as the court stenographer was the only detail omitted and as the writer was being fired and took no notes, posterity is the loser.) Finally both sides rested, and the audience too, — their sides. The Court summed up in a masterly manner, declared the office of secretary vacant, and recognized Sid Strickland, who brought in a report from the old nominating committee, dormant since 1916, naming Ros Davis for the office. The ex-secretary refused to accept the jurisdiction of the court, making an appeal to the electorate, and proceeded to distribute ballots, which Henry Buff, as teller, announced were unanimous for Ros Davis, — which was strange, as they were all marked for him beforehand, in ink. Ros accepted his new honors modestly, and when served with a notice that these notes for the REVIEW were already overdue, he collapsed in a heap on the floor. Then every one went downstairs and got all lamed up bowling. Armstrong and Strickland tied for high score at 106, and Prescott hung up a record for putting five balls off the alley in less than his own length.

It is only fair to Ros, our new secretary, to say that he was drawn into the prosecution stunt without any knowledge of the job that was being put up on him, but that is as much warning as I had fifteen years ago, when Bob Lord aimed the steam roller at me and jumped off. Whether Ros will get as much fun out of it as I have had, and whether the Class will go forward to a new lease of life as the Best Class Yet, depends now on you fellows on the outside. — *G. D. Marcy, Ex-Secretary.*

1906

J. W. KIDDER, *Secretary*, 50 Oliver Street, Boston, Mass.

E. B. ROWE, *Assistant Secretary*, 108 Water Street, Boston, Mass.

The secretary thought the absence of 1906 notes from the January issue might lead to letters of protest which could be used for notes in this issue, but evidently the Class is good-natured and not disposed to take it out on the secretary.

As a matter of fact, we are pretty hard pressed for notes in this issue — so hard in fact, that the secretary feels constrained to write a little about himself. Last winter, he spent three months in New York attending a Transmission School conducted by the American Telephone and Telegraph Company. The main object of conducting the

school was to hold similar schools in the associated companies, and just at present the secretary is very busy conducting such a school in Boston. It works out that the usual business hours are devoted entirely to the school while the time outside which might be used on Class notes, etc., is devoted to study which is necessary to keep ahead of the subjects which we are trying to teach.

It would be interesting to know how many '06 men have succumbed to the radio epidemic which seems to be sweeping over the country. Ralph Clarke is one of the best known amateurs around Boston. A *Sunday Herald* issued a few months ago contained a portrait of Ralph and a picture of his apparatus. He has been interested in wireless for some years and has a complete sending and receiving radio telephone station at his home in Dorchester.

The secretary met A. T. Trowbridge some weeks ago, who advised he had taken the Boston agency for the Simplex Oil Heating Company of Providence. Trowbridge is located at 6 Beacon Street and is doing business under the name of Trowbridge & Snellings.

The *New Haven Register* of February 22, 1922, contained a notice of the annual meeting of the Connecticut Society of Civil Engineers at which Robert J. Ross of Hartford, Conn., was elected president for the ensuing year. Ross is an '06 man who since leaving the Institute has specialized particularly in municipal engineering and at present is assistant city engineer for the City of Hartford, Conn.

The secretary attended the alumni dinner the first part of January. The '06 representation consisted of himself and Herb Terrell of Philadelphia.

It is to be regretted that this month's notes are not more copious, but you will admit that they are an improvement on the January notes. Class interest seems to be rather dormant just now and the secretary is willing to accept the full responsibility for the condition. He would welcome any suggestions towards improving this condition and would be glad to hear from any members of the Class — even though they write to say he ought to be fired.

1907

BRYANT NICHOLS, *Secretary*, 2 Rowe Street, Auburndale, Mass.

HAROLD S. WONSON, *Assistant Secretary*, care W. H. McElwain Co., Manchester, Mass.

A dinner of men near Boston was held at the Engineers Club, Boston on February 28, which proved to be an unfortunate date for attendance as only nine fellows appeared: E. L. Chaffee, Sam Coupal, Hud Hastings, Clarence Lamont, Alexander Macomber, Bryant Nichols, Bob Rand, Winslow D. Robinson and Robert K. Taylor. From the standpoint of interesting program, however, the gathering was one of the best ever held. After the usual interchange of experiences among those present and the usual inquiries regarding many of those not present, by previous arrangement, two of the men who are doing things rather out of the ordinary told informally but very entertainingly of their work.

The first was E. Leon Chaffee, graduate in Course VI and now professor at Harvard University with office in the Cruft High-Tension Electrical Laboratory. Although it is very much condensed and devoid of practically all of the "human interest" touch that Chaffee gave in his talk, the following is a synopsis of his remarks:

"The secretary has asked me to sketch what I have been doing with myself since I left the Institute in 1907. I dislike very much writing even a brief sketch with so many I's. After graduating, I came over here to the Harvard Graduate School of Arts and Sciences and took up the study of physics. In 1908, I took the degree of A.M. and in 1911 the degree of Ph.D. During my graduate study, I assisted in the teaching and was appointed instructor in electrical engineering 1911-1915 and instructor in physics 1912-1917. In 1917 I was appointed assistant professor of physics. My particular field is electric oscillation and radio telegraphy. The pleasant part of a university position is the opportunity afforded for research, which compensates in many ways for the small salary.

My doctor's research on a 'New Method of Producing Oscillations by Impact Excitation' turned out to have some practical value in the form of a patent for the so-called 'Chaffee Gap,' which patent I sold for a fairly good figure.

Besides teaching and research, I have had the opportunity to do some outside work. I have been for about ten years engineer for John Hays Hammond, Jr., engaged in develop-

ing radio control of torpedoes. During the experiments at Gloucester, Mass., we controlled a fast boat from an airplane. Out of the work came a new system of radio communication which proved of value from a military standpoint, and I was sent by the Signal Corps to France in the summer of 1918 to test out the system with the American Expeditionary Forces. The signing of the armistice a few months after my arrival in France naturally reduced the interest in the experiments and I was sent to England to demonstrate before the English Navy and Army. The United States Navy are still aiding in the further development of the radio system which will undoubtedly soon be adopted as a regular means of signaling. Another 'outside job' which has been of extreme interest is concerned with making it rain by a new electrical method. This work is being pushed by the Government at McCook Flying Field in Dayton, Ohio. The principles are confidential which prevents me saying more.

During the last two years I have been experimenting in a line apparently far from my chosen field. I am trying to find out why we see and why we distinguish colors. I use frogs' eyes which are taken out, cut in half and the retina connected by suitable terminals to a very sensitive amplifying system. A photographic record is taken of the deflections of a galvanometer as the eye is illuminated. The frog's eye so connected to a galvanometer will give deflections for light much fainter than I can see with my own eyes. The work is yielding many interesting and I hope valuable results."

The second speaker was Hudson B. Hastings who is living at 58 Garden Road, Wellesley Hills, Mass., and who carries on economic research at home going frequently to New York for consultation and investigation. As with Chaffee any written statement of what he said is "cold-blooded" as compared with hearing him talk, but the following summary gives a good idea of his story.

"The first subject undertaken by the Pollak Foundation for Economic Research is 'Money.' The particular phase of this subject toward which we are directing our attention is: the relation of money to the state of business activity. This topic may be divided into two parts: 1. Setting forth the facts which are more or less well-known to all careful students in such a manner as to interest the banking and business world in a real study of the subject of money to the end that they may shape an intelligent course in making money serve more perfectly the functions for which it is used; and 2. Finding out the relations existing between our monetary systems and the state of business activity.

One of the main functions of money is to facilitate the exchange of goods, yet we know that the annual volume of these exchanges is subject to wide fluctuations, usually known under the name of business cycles. We hope to find the underlying causes of the swings of business and to determine to what extent they are due to one or more of the following causes: 1. The use of any form of money. 2. The particular monetary systems now in use in the civilized world. 3. Production of goods under a system involving the use of capital goods and the payment of wages, other operating expenses, interest and profits. 4. The particular customs and practices of business which have developed under this system. 5. Lack of information. 6. Natural forces.

We are particularly fortunate in having the hearty coöperation of a number of thoughtful men in banking and business who are in a position to supply us with virtually all of the information which we consider has a bearing on our problem."

Harry R. Crohurst is at Fort Caswell, Southport, N. C.—Lawrence R. Davis has been married and is located at Engelmire, Plumas County, Calif.—V. H. Dickson, 4030 South Michigan Avenue, Chicago, Ill.—S. J. Egan, one of the few Course XIII men who has followed naval architecture is working at the Boston Navy Yard and lives with his wife and four children at 22 Fairmount Avenue, Wakefield, Mass.—Paul Frederick, 106 Waverley Place, Schenectady, N. Y.—George A. Griffin has stuck to engineering, being with the Providence Water Supply Board, 661 Westminster Street, Providence, R. I., as assistant engineer. He has three children, a girl twelve and two boys, six and three years of age and lives at 31 Anthony Street, East Providence, R. I.—Raphael G. Hosea is deputy state engineer, 121 State Capitol, Denver, Colo.—Warren I. Keeler, care Valentine & Co., 456 Fourth Avenue, New York City.—John H. (Stud) Leavell is now with the Stone Cañon Mine, Stone Cañon, Monterrey County, Calif.—Stuart Miller finally succumbed and was married on January 26, 1922, to Miss Natalie M. Dodd. His home address is 2210 Auburn Avenue, Cincinnati, Ohio.—W. Watters Pagon, 1101 Lexington Building, Baltimore, Md.—W. Pearce Rayner, 1101 Leland Street, Chevy Chase, Montgomery, D. C.—Herbert A. Terrell, 921 Lafayette Building, Philadelphia,

Pa.— Word has been received without detail of the death of Edmund A. Thornton. The secretary will try to secure more facts for the next REVIEW.— William E. Turnbull, Box 111, New York University, New York City.— Richard G. Woodbridge, Jr., Brandywine Laboratory, Henry Clay P. O., Delaware.

1908

RUDOLPH B. WEILER, *Secretary*, Care Sharples Separator Co., West Chester, Pa.

LINCOLN T. MAYO, *Assistant Secretary*, Care American Motor Equipment Co., 181 Massachusetts Avenue, Boston, Mass.

At the moment of going to press word comes of the death of Charles W. Whitmore.

CHARLES WILLIAM WHITMORE

Charles William Whitmore was born at Cambridge, Mass., on June 12, 1885, he prepared for Technology at the Cambridge English High School and entered with the Class of 1908. From the first he was deeply interested in both Class and Institute activities, being a member of the Tug-of-War Team in both his freshman and sophomore years and later manager of the varsity basket ball team. He was also a member of the chorus in the Tech Show for three years. He served as resident Class secretary from 1909 to 1915 and the signal success which he achieved in this office is perhaps the best tribute to his ability as an organizer and leader of men. His tireless devotion and unswerving loyalty to his Class duties made his name a byword for those members of the Class near Boston who attended the bi-monthly dinners.

After leaving Tech he became associated with Monks & Johnson, engineers, with whom he remained until 1912, when he joined the engineering force of Lockwood, Greene & Company. In 1915 he left Lockwood, Greene & Co. and shortly after sailed for Brazil where he was engaged in export work until 1917. In 1918 he became general works manager of the Riverside Boiler Works which position he held until ill health forced his retirement in 1920. While at the Riverside Boiler Works he developed a combination riveted and welded joint for range boilers and tanks. The lap seam was first riveted and then sealed on the outside by oxy-acetylene welding. This was considered a very important improvement in the production of tanks up to two thousand-gallon capacity.

On leaving the Riverside Boiler Works in 1920 he went to California to recuperate, he remained there some months and again came East only to be advised by his physician to return to California, which he did in August, 1921. The next few months were spent in leisurely automobile travel through California with his wife, in a vain endeavor to regain his strength. He was taken ill with pneumonia and died very suddenly on February 6, 1922, at Redlands, California.

In 1910 he was married at Saco, Maine, to Miss Mary A. Bryant, who survives him.

At the last meeting of the Class a committee was appointed to draw up resolutions which have been presented as follows:

Whereas Almighty God in His infinite wisdom hath removed from us another of our Classmates, be it

Resolved: That in the death of CHARLES WILLIAM WHITMORE the Class of 1908 of the Massachusetts Institute of Technology has lost a true and loyal member who for years as Resident Secretary gave unsparingly of his time and energy for the welfare of the Class, and be it further

Resolved: That a page in the Class Records be set aside in his memory and these Resolutions spread thereon; and be it further

Resolved: That a copy of these Resolutions be forwarded by the Class Secretary to his bereaved family with our sincere sympathy.

HERBERT T. GERRISH,
H. L. CARTER,
B. S. LESLIE,
Committee on Resolutions.

NEW ADDRESSES

Frederick A. Cole, 55 Brookside Avenue, Newtonville, Mass.; Leseur T. Collins, 60 State Street, Boston, Mass.; Richard C. Collins, 215 Waterman Avenue, East Provi-

dence, R. I.; Chesney H. Criswell, Care Great Western Sugar Co., Greeley, Colo.; William C. Folsom, 3439 Duncan Avenue, Cincinnati, O.; Jacob A. Fottler, 486 Fourth Avenue, Wauwatosa, Wis.; William R. Heilman, 1244 Washington Avenue, Evansville, Ind.; Arthur T. Hinckley, 937 Harrison Avenue, Niagara Falls, N. Y.; Stiles F. Kedy, 12 Pearl Street, Boston, Mass.; Richard Y. Kennard, 1526 North LaSalle Street, Chicago, Ill.; Clarence A. Lamont, 10 Grove Street, Wellesely Hills, Mass.; Arthur C. Merrill, 109 Main Street, Peabody, Mass.; Everett H. Newhall, 10 Liberty Avenue, West Somerville, Mass.; Alfred G. Place, 1426 Elm Street, Youngstown, O.; Ralph T. Regnell, Box 564, Oak Bluffs, Mass.; Miles Sampson, 925 New Boston Road, Fall River, Mass.; Horace S. Sargent, 298 Central Street, Auburndale, Mass.; John R. Tabor, Care Jones & Tabor, 609 Binz Building, Houston, Texas.; William H. Toppan, The Cone Bag Co., Madison, Me.; Major Laurence T. Walker, University of Minn., Minneapolis, Minn.; William E. Weinz, care Grasselli Chemical Co., 146 West Kinzie Street, Chicago; George D. Whittle, 881 Mills Building, San Francisco, Cal.; Robert A. Angus, Dwight P. Robinson & Co., Inc., 125 East 46th Street, New York, N. Y.; Wilfred E. Booth, P. O. Box 533, Foxboro, Mass.; Arthur E. Bremer, 93 Knickerbocker Road, Englewood, N. J.; Riggin Buckler, 325 North Charles Street, Baltimore, Md.; Rodney C. Caryl, 1314 South Division Avenue, Grand Rapids, Mich.; Richard W. Wilson, Box 995, Great Falls, Mont.; Oric O. Whited, Jr., 519 New York Life Building, Minneapolis, Minn.; Geoffrey W. Welch, Otter Tail Power Co., Fergus Falls, Minn.; Channing Turner, 728 North Third Avenue, Tucson, Ariz.; Robert B. Todd, Sutherland Street, Shawsheen Village, Mass.; Harry P. Sweeney, Sterlington, N. Y.; Arthur E. Skillings, 83 Easton Street, Allston, Mass.; William A. Hall, 39 Avenue des Champs Elysée, Paris, France; Comdr. Roy W. Ryden, U. S. N. C. C., Balboa, Canal Zone; William H. Medlicott, care W. A. Hamilton Co., 114 Milk Street, Boston, Mass.; John H. Locke, 4965 McPherson Avenue, St. Louis, Mo.; John A. Kydd, 78 Albert Avenue, Edgewood Station, Providence, R. I.; Carl W. Keniston, 1710 Adams Street, Madison, Wis.; Robert D. Hennen, 107 High Street, Morgantown, W. Va.; Basil L. Gimson, Five Oaks Steep, Petersfield, Hants, England, and Monroe Ames, 38 Pearl Street, Medford, Mass.

1909

CHARLES R. MAIN, *Secretary*, 201 Devonshire Street, Boston, Mass.

GEORGE A. HAYNES, *Assistant Secretary*, 530 Atlantic Avenue, Boston, Mass.

Six of the men were present at the Alumni dinner held in January, Bowers, Haynes, Keables, Palmer, Perry and Spencer comprising the '09 delegation. This is about the number representing other classes about our time but we should have a considerably larger delegation than this at these dinners.

On March 10 the Class held an informal noon luncheon meeting at the Exchange Club and eleven of the men were present at that time. It was decided to hold a Class outing again this year, the general sentiment being that it should be somewhere along the South Shore. It is hoped that within the next five or six weeks plans may have materialized so that a definite announcement can be sent to the Class.

"Bob" (R. L.) Smith announces the arrival of Elizabeth Hunnewell, born on March 6, 1922.

Percival L. Adams, VI, died very suddenly March 9, 1922. We received this information just before going to press.

1910

DUDLEY CLAPF, *Secretary*, Jeffries Point, East Boston, Mass.

We will start the notes cheerfully with an engagement announcement clipped from the *Boston Transcript*:

"Mr. and Mrs. Edgar Morris Warner of Putnam, Conn., have announced the engagement of their daughter, Miss Frances Lester Warner, to Mayo Dyer Hersey, son of Mr. and Mrs. George Milbank Hersey of Cambridge and of Hartford, Conn.

Miss Warner, known to many through her contributions to the *Atlantic* and other magazines, is a member of the Boston Authors' Club and has published the following

books — "Endicott and I," "Life's Minor Collisions" and "Pilgrim Trails." She was recently assistant professor of English at Wellesley, and is now on the editorial staff of the *Atlantic Monthly*.

Mr. Hersey is a member of the Washington Academy of Sciences, the Cosmos Club of Washington, the American Society of Mechanical Engineers and the Military Order of the Loyal Legion, to which he was elected as successor to the late Rear Admiral N. Mayo Dyer. He is at present associate professor in the department of physics at the Massachusetts Institute of Technology.

Mr. Hersey organized the aeronautic instruments section of the United States Bureau of Standards, in 1917, and during the war was sent by the Government on a special mission to England, France and Italy, in connection with aeronautic instruments. It was in France that he first met Miss Warner's brother, Lieut. John A. Carpenter Warner, who was later associated with him at the Bureau of Standards. There will be a quiet wedding in June at Miss Warner's home."

His classmates will all be grieved to note the death of Loren N. Downes, Jr. *The Herald* on March 10, had the following notice:

"Funeral services for Loren N. Downes, Jr., who died yesterday at his home, 88 Grove Street, Watertown, in his thirty-third year, will be held Friday from Trinity Church, Boston, at 2.30 p.m., the Rev. Dr. Alexander Mann officiating. Mr. Downes, who has recently been connected with the New England Confectionery Company, was at one time dean of the School of Commerce and Finance at Northeastern College in Providence. He was graduated from the Massachusetts Institute of Technology in 1910, and served as an instructor in that institution the following year. Mr. Downes is survived by his widow, Dorothy Busby Downes; his father, Loren N. Downes, Sr., and a son, Loren, 3d. He was for many years a choir boy at Trinity Church."

H. E. Beebe of Ipswich, South Dakota, writes as follows:

"As letter writers the Class of 1910 may be classed right with present farming conditions. 'The more I think of it, the less I think of it.' There were some live wires in our Class during the short one and one half years that I honored the institution with my presence and many of these must have achieved more than the ordinary amount of success. Let us hear from them.

My business of banking and real estate has grown steadily in spite of the liquidation and one might say attenuation of the price of grain and live stock. The farmers are the greatest hoppers in the world and right now are planning as usual on putting in large acreages and competing with each other, although the price of grain at the elevator today is much below the cost of production. This, however, is of no particular interest to the classmates except that they cannot sell their manufactured products in the West until fair prices are secured for the products of our farms. The only gossip I know is that a blue-eyed girl, named Beatrice, arrived at our house by request last fall. Her pet name is Totolla-Sioux, tongue for blue eyes. The original cost was reasonable, but the upkeep has raised the rates of interest in this section. Ralph George writes that he came to Boston last fall to be married in Tech atmosphere. Probably the first child will arrive with a silver slide rule in its hand. Would like to get the address of E. D. Greene."

Again I am grateful for the work V. T. H. Bien did in getting autobiographies from the Naval Architects, and will add another instalment.

From L. E. Geary, Seattle, Washington:

"Have often wondered what you are all doing and trust you are all well, happy and prosperous, and have plenty of youngsters. I have a little girl, Marjorie, with her mother in Louisville, Ky. She is five and a half years old. At present I am all out of wives, having been divorced in 1916.

I see our old friend Andy semi-occasionally, and he is apparently the same as ever. He never mentions the fact that he used to dislike walking to school with me when I used to cut up a bit on the streets of Boston. I don't pull any of that old stuff in this village, as this is where I have to look for my meal ticket.

One night while I was working in my office on Pier One, our old friend Chape stuck his head in the door and talked fast for a few minutes, but quickly beat it to join some friends who had come down from Canada on the steamer with him. I did not get a good look at them, but they must have been pretty neat, as he was in such an awful hurry. I did gather, however, that he is in the lumber business, but forgot the name of his new home town.

I read in the Naval Architectural Society Transaction that our old friend Chapman is a professor at Lehigh, and I'll bet he is a good one, as I well remember it was difficult to make him smile, even in our drawing room, which you will admit was some playhouse. I'll never forget the remark of our instructor in machine design (name I cannot remember) when he remarked that our Class "was the most kittenish bunch of children it had ever been his pleasure to deal with" or words to that effect.

I believe I told you chaps at graduation that I was going to the Johnson-Jeffries fight at San Francisco, and, the day after, get aboard the Seattle yacht *Gwendolyn* at San Francisco for the race to Honolulu, returning to Seattle in September, which would have been some trip.

I roomed the last year at old Tech Chambers with a chap named Donaldson from Carrollton, Kentucky, who was a good student aside from the fact that somebody used to lean him up against the door about two a.m. when I was studying hard, and who never got above zero as a passing grade while at the Institute.

Now my story begins — Don and his brother were going to the prize fight also, which was scheduled for July 4, so Don figured the proper thing for me to do was to stay at his home at Carrollton until time to leave for Frisco. We accordingly gathered together all the necessary nickels and by strict economy arrived in Carrollton with plenty of money to see the fight. We had a fine time there, driving over to little dry Kentucky towns in a four-horse surrey to the dances. Carrollton was a wet town, so about four of us would start out from Carrollton with about 75 to 100 pints of beer in sacks with ice on a hot day and probably bring up at some dry village for a dance, where we would be very popular indeed, and 'a fine time would be had by all.'

When the fight was shifted to Reno and the yacht racing was called off we decided not to go, and spent our money instead — in fact, when it came time to leave in July I could only get as far as Minneapolis, as the money I had loaned to the Carrollton birds could not be collected when I needed it for my homeward journey. I dropped in on dear old Brooke's dad at Minneapolis, and he helped me draw a draft on my father for the necessary change to keep me travelling.

I arrived in Seattle on the early morning of about the second of July, 1910, and found that the Seattle yachts were all at Victoria, B. C., 73 nautical miles away, for the season's race meet; and instead of going home took a steamer for Victoria, arriving there just in time to sail one of the yachts in the race.

At that race one of the Canadians gave me an order for plans for a 50-foot yawl, which I designed at home on my small drawing board set up on the dining-room table. After delivery of these plans I had a few nickels left with which to open an office, and started out on the Grand Trunk Dock. The first year I went into business happened to be a good one for boat designers, and an old friend of my father's in the cannery business gave me my first order for a commercial boat — an 80-foot cannery tender worth about \$14,000 in those days, and on the strength of the order for her plans I got four more in quick succession from other large cannery concerns. They were the first cannery tenders ever really designed, and from that time on a great deal of my business came from cannery concerns, and, in fact, I used to set the style in that type of boats, developing a design more adapted to the work from year to year.

I built a number of other boats the first year, and altogether took in about \$12,000 in fees. At one time I had three chaps working for me, but as I used to work days, nights and Sundays, my expenses in that direction were not so very great. I did, however, spend considerable money entertaining the cannerymen and going after business generally, but at that had enough left to get together a fairly good bunch of office equipment.

The next year I built the largest yacht that has been built here, a 100-footer for one of the old Seattle pioneers, and when this boat was ready turned the key in my office and went with the owner on an eight weeks' cruise in Alaska waters, covering about 4,000 miles, and incidentally getting a lot of good boat experience.

Up until 1914 I got my share of boats to design and enjoyed the work immensely; but 1914 was in more respects than one a great little year for me.

The same day that war was declared between Germany and France, the Grand Trunk Dock burned down. It was some bonfire, and I lost everything in the office, which by that time was pretty well equipped. I had fine instruments of all descriptions and a lot of beautifully made models, and some marine paintings by an old sailor, now dead. I also lost all my tracings and records but saved my hat and my draftsman. He and I were

lucky enough to climb out the window and shinny down a rain pipe to safety, and were afterwards able to carry out five other poor fellows who had jumped through the window and were injured.

I immediately opened an office in Pier One and redesigned the two or three boats on the boards at the time of the fire, and got along fairly well, until in October on a trip to Chicago I married a girl I had met in Carrollton four years before. Now comes the sad part of this story, which brings it up to 1916, when we decided to get tied loose.

If you will remember, yacht racing has always been my hobby, and most of my spare cash goes that way. In 1909 we had a big row with the Canadians, and it was not until 1914 that we resumed. In 1913 Sir Thomas Lipton was out here, and the Yacht Club and Press Club gave him a swell party, after which he donated a \$3,000 cup to be raced for by Universal Rule boats of class "R." There were three boats built here, of which my boat, *Sir Tom*, was the best, so we defended the cup against the new Canadian boat *Taurenga* successfully early in July of 1914; and the little *Tommy* has never been beaten since, but I believe we are due for a trimming this year by the new Canadian boat designed by Nicholason, who turned out the *Shamrock IV*.

In 1915 we defended the cup against an Everett boat, *Myth*, and late that summer shipped the *Sir Tom* to San Francisco on the deck of a steamer. We sailed down to San Francisco to the Fair on a yawl and had a fine time in Frisco Bay racing, during our nineteen days' stay. *Sir Tom* was never beaten and we shipped home six fine cups along with the *Sir Tom*, and then sailed home again, arriving here early in September.

In 1916 we defended the cup against one of the old defenders who had been revamped to trim us.

In 1917 when the Shipping Board was evolved I closed my office and was attached to the wood ship division here as a Naval Architect for District 8, which position I held until shortly before the signing of the armistice. Incidentally, I was so busy that my little *Sir Tom* was neglected and sunk in a storm in 137 feet of water, and it was with great difficulty that we located her and got her up; but last year we fixed her up as good as new and defeated the Canadians again.

While with the Shipping Board I did a great deal of hard work, having in my department four draftsmen and a number of clerks. We issued all instructions to contractors building wood ships in this state, and to all the inspectors, of which we had about forty at one time, together with making all decisions on technical matters arising during the hurry and bustle of building these boats. Some days we would mail as many as three hundred blue prints.

During 1918 I made one trip of inspection through the Southern shipyards on Gulf ports, and in August another to Philadelphia, having been called back there by the ship-building board with the plans of a large type of wood ship I had developed. It was called the 'Geary-type' ship, and was scheduled to be built by all the wood shipyards in the country shortly before the armistice was signed. These boats were 300 feet over all; 315 b.p.; 48 feet beam; and 23 feet, 2 inches moulded depth; of 5,700 tons capacity; and requiring 2,225,000 feet of lumber in their construction, there being no steel except the fastenings.

Two of the ships were completed here, the *Snoqualmie* and *Broxton*, and have since given good accounts of themselves in a very severe trade, carrying coal from Australian points to South America. We used to measure with a transit the deflections of all the vessels when launched, taking offsets at five points in the length of the ship from a straight line before and after launching. The smallest deflection we got on the 280 feet standard wood ships was seven-eighths of an inch, and that on this Coast. The average was about $2\frac{1}{2}$ inches and the maximum about $5\frac{1}{2}$ inches. Of our two big ships, the deflection on the *Snoqualmie* was one-eighth, although a much longer ship; and on the *Broxton* it was zero at all five points, showing that they were strong ships and that we had hit on the proper principle for large wood ship construction. The idea is of no use now, however, as the large wood ship is a dead one and of course never would be as satisfactory as a large steel ship, especially with the coming age of Diesel propulsion using liquid fuel, to which the steel ship with her double bottoms for fuel storage naturally lends itself as the proper type.

I designed the first commercial full Diesel boat in this country in 1913, the cannery tender *Warrior*, and the first full Diesel tug boat, the *Chicamauga*, both of which are still operating. Since going into business I have turned out everything imaginable in the type of ship craft, from fish scows and pile drivers and fast shallow draft tunnel boats that we

have built, knocked down and sent to Siberia and Canada, to classy motor yachts where we have carte blanche and no expense spared, four nice yachts being built last year.

Last year I also designed two twin-screw oil engine tug boats for a mahogany lumber concern in Manila, sending over from here 120 feet of Port Orford cedar lumber to resist the ants and teredos in Oriental waters, and all other materials necessary to build the boats, including the engines, a man to install them and a man to build the boats.

All of this work is very interesting and remunerative, but the most interesting job last year was a trip to San Francisco, where I purchased the old whaler *Thrasher*, formerly a steam barque before I was in Bath, Maine, in 1883. We had her sailed to Seattle and entirely rebuilt the old canoe, spending \$142,000 fitting her out for work in the Arctic ice, trading for furs on the Northern Siberian Coast, where a vessel of the same size, formerly belonging to this company, had been crushed in the ice in 1919. We rebuilt this ship and re-rigged her as a three-topmast schooner, and installed a 300 h.p. MacIntosh and Seymour Diesel engine with complete electric auxiliary, including windlass, winches, etc. In other words, made a 1920 ship out of this old crate. About a month ago she was lost by fire at sea, and while I undoubtedly will build a new steel boat for the same company this winter, I believe her loss hurt me worse than it did the owners.

The last few months there has been little or nothing doing in the designing line, as business conditions are so upset, but for the coming season I have many fine boats to build, including some nice pleasure craft and one steel vessel to be 2,700 tons d. w. to 2,400 h. p. Diesel. She will be a very expensive ship, everything operated by electricity, including the galley equipment, but excepting the main machinery, and will be quite a fast vessel, but primarily an overseas towing proposition. She will be operated between Seattle and New York, carrying and towing lumber and taking whatever offers on the return, and while you might think that any one is crazy to build a steel ship in this day and age, with about \$2,000,000,000 worth of lemons lying around cheap, the fact is that in the future a ship that gets nickels will have to be specially designed for the business in hand.

During the war the building of ships reduced to a manufacturing proposition, where any old ship was adapted to any old route; but with high operating costs times have changed, all of which lets us independent Naval Architects (I mean the boys that are practising as a profession) in on the ground floor just now.

I usually get East about once a year on some business or other, but have not been back since 1918. Am coming East, however, to Washington, Philadelphia and New York, the first week in September this year, and would like to hear from many of you chaps anywhere on the route, so that I can look you up if time permits. Don't forget if you ever come to Seattle, I shall expect you to not poke your head in the door and tell me what a hurry you are in as Chapie did, but to stick around long enough for me to give you a little yachting trip, as I have never taken on a partner (in the designing business, I mean) and have no one to account to, so can turn the key in the office for any length of time. In fact I am leaving tonight on a yachting trip to Victoria and Vancouver, B. C., without waiting to sign this message to my old classmates."

From Gordon G. Holbrook, 100 Elm Street, Quincy, Mass.: "I was born in Minneapolis, Minn., on the eleventh of June, 1887. We will pass over the interim from that date until the spring of 1910, when in company with the other embryo Naval Architects I obtained my sheepskin from Tech. Immediately after graduation I retired to the wilds of Minnesota to recuperate from the long grind of the senior year and untangled myself from the integral signs of the theory of waves. Before boarding the twentieth century limited, however, I promised to return in the fall as assistant to the Naval Architecture Department, so felt assured of being able to keep myself in collar buttons and shoe-strings during the coming winter.

After communing three months with the Middle West I combed the hayseed from my hair and joined the staff of the Naval Architecture Department under the direction of Pop Leland. While my superior was tilling the soil in Saxonville, I was endeavoring to instill yacht design into the sophomores. In the spring I remained with Professor Everett to carry on some experimental work with propellers with the 40-foot model boat *Froude*. The *Froude* was located in the Charles River basin and I set up housekeeping aboard the ship on the first of May, 1911. With the aid of a pipe, berth and an alcohol stove I managed to keep body and soul together until September 1, running trial trips at three a.m. when there was no wind, and on rainy days plotting the results of the experiments in the drawing-

room. It was good experience and Everett was a good man to work with. He had the true optimism and perseverance of a natural experimenter.

In October, 1911, I played a return engagement as assistant instructor at the Institute. Outside of the regular class work I figured up the results of our summer's experiments and designs and directed the building of a new and larger experimental boat, the *Fullton*. I did not see her in action, however, for I resolved that I had had enough of the teaching game and started a campaign offering my services to our most representative shipyards. I managed to impress Mr. Wetherbee of the Bath Iron Works with my latent powers and on June 1, 1912, went to Bath as assistant to Mr. W. S. Newell on the repair and jobbing work. My experience here included everything from propeller and boiler design to tank and digester work.

During the preceding winter I had become engaged to Miss Marjorie B. Ellis of Cambridge, Mass., and had a real incentive for saving money, at the same time found it necessary to make frequent trips to Cambridge with a disastrous effect on my bank account.

During the first winter in Bath I maintained a little private class in Applied Mechanics of a dozen draftsmen at the Iron Works. We used a room in the high school building two nights a week which the city fathers donated to the cause.

On June 7, 1913, the same Marjorie Ellis and myself were married in Cambridge and went out to Minnesota on a two weeks' honeymoon. On our return to Bath we settled down to housekeeping and I dug harder than ever at the Iron Works. By this time I was doing all the scientific work in the engineering department for Mr. Wetherbee. Early in 1914 I took over the scientific work for the department as well, under Mr. McInnes, superintendent of construction. I began to get more outside work to do as well and I had an active part in the building of destroyers, yachts and passenger boats which we had under contract.

My wife and I became well acquainted in Bath, where we had a very pleasant four years. The night school which I had started in 1912 with state and city aid grew to five hundred students and twenty teachers guaranteeing to teach any subject whatsoever that twenty students would petition for. As principal of this school I had my hands full but managed to squeeze in a little amateur gardening.

On the seventeenth of May, 1917, Gordon Ellis Holbrook was born and immediately started into a state of activity which he has kept up ever since.

With increased responsibilities I began to get restless and resolved to make a change. I had read of the big program of the war for destroyers about to be started and wanted to turn my experience to the best advantage. I told Mr. McInnes that I was going to leave on the first of November and set about hunting for a job. The Fore River Plant of the Bethlehem Shipbuilding Corporation made me an offer which I accepted and I came to this plant in November, 1917, as assistant to the superintendent of hull construction. We were just starting a program of thirty-six destroyers and I was given charge of all the hull work in the water. We built up an organization to follow the work and when we got started turned out between two and three destroyers a month besides a regular program of submarines and merchant work.

The Government had built a special destroyers' plant at Squantum, Mass., to be managed by the Bethlehem Corporation to build thirty-five more destroyers. As is usual with a new organization this program was slow in starting and in November, 1919, Mr. Benson returned to Fore River and I was transferred to Squantum. By this time the program was in full swing and we were delivering as many as three and four destroyers a month regularly. One destroyer was built from keel laying to delivery in forty-five and one-half working days, which set the world's record. We finished the program at Squantum in January, 1920, and at that time I returned to Fore River.

At the present time I am in general charge over the hull work under Mr. Benson, who is assistant general manager. We have an extensive program under way in merchant ships and submarines as well as a battle cruiser, a battle ship and two scout cruisers. It is necessary for me to travel considerably to keep in touch with what the other shipyards are doing and with our own work it keeps me pretty busy.

On March 21, 1920, Marjorie Elizabeth Holbrook was born and promises well to be as good and quiet as her brother is boisterous. We are living in Quincy, Mass., at 100 Elm Street, pursuing the simple life and for excitement packing the kids into the machine and going to the beach or after they have gone to bed stealing away to Boston. Nevertheless

we extend a hearty invitation to any or all of the Course XIII bunch to rally round at any time they are in this vicinity, and we will have a private reunion of our own."

From E. J. W. Ragsdale, 1530 Powell Street, Norristown, Penn.: "Tech pitched me into the outer darkness with a degree in Naval Architecture and a healthy appetite. The last was my own. Shipbuilding being at the time the deadiest thing alive, I had little hesitation in taking a look at the ample rations offered by the Army. In July, 1910, competitive examinations for commission in the Coast Artillery were held. I took these and was one of the twelve selected. My modesty compels me to refrain from mentioning my relative standing. I will say however that M. I. T., that is an M. I. T. man stood number one—he was not I. In October I was commissioned as a second lieutenant and sent to Fort Monroe, Va., for duty. Nothing much happened here with the exception of the fact that I married. After six months' garrison school, I was ordered to Newport, R. I., and was stationed there for almost two years. My duty was primarily with troops although I did spend some months in the field making military maps. You all see how wonderfully my previous training had stood me in good stead.

However, I soon tired of the life of a bombardier and took the competitive exams for the Ordnance Department. Again luck was with me. I was detailed to that department and ordered to report to Watertown Arsenal, made famous by Getty's description of the testing machine set up there. Here I took the student officer's course, which is another name for getting a lot of laborers of no use for a lot of money. This was before the war had dignified the slogan of "Little Work and High Pay."

A year's loaf at Watertown brought disaster. I went to Sandy Hook Proving Ground as proof officer. Here there was a plenty to do and little to do it with. The testing of the big and little guns which afterwards played a part in the late war was not only interesting, but proved of professional value. However my year's lease was up. I went to Washington as an assistant to General Crozier, Chief of Ordnance. This was in the summer of 1915. I became a fixture, for I have since had to resign from the Army in order to get out. However, the work in Washington prior to the war was attractive. Interest in material and military preparedness was gradually awakening and relatively big projects were on. I got an opportunity to design some of the big guns which later came into play on railroad mounts and to delve into the newer phases of modern warfare. I refer particularly to chemical warfare and airplane bombing. In this connection I made my initiation in the flying game. Our efforts at that time were mighty feeble—so were the planes we had, I regret to say. There was little of the feeling of security that I have experienced in the later-day machines.

War having been declared, my previous dabbling in the methods of warfare peculiar to the European war, resulted in my being told to organize a new section of the department for the purpose of handling those weapons not heretofore part of the standard equipment. This organization became later known as the Trench Warfare Section. Our end of the game covered: trench mortars, military pyrotechnics, grenades, drop bombs and poison gasses. The last became such an important issue that in July, 1918, the gas project was taken over to form the Chemical Warfare Service under General Siebert. Shortly after this, I went stale on the job and wanted a change of atmosphere. I suggested a trip to France might prove exciting, but my chief replied that he had heard me before on the subject. He therefore appointed me as officer-in-charge of the Bethlehem Steel Company. I remained in Bethlehem until after the armistice, when I was called back to Washington to resume charge of my old division. Here I stuck. I washed the dishes as well as I could without the help of a Congressional Investigation and then sent in my resignation. That book is closed.

Some friends had some money that they were afraid the income tax would get. I have relieved them of that anxiety by putting it into my latest venture, The Keystone Die Casting Co. Personally I don't know anything about the business, but I would like to learn. However, I have a partner who does know the game. This company is just commencing to get its head above the surface.

As I said before, I am married and, as I say now, have three children—all girls. As I care to improve on my lot, am perfectly happy, still love to smoke, could enjoy a drink and will always be pleased to see any or all of the old crowd, wet or dry."

"Dear Bieny:

You ask what I am in this company. Here goes, general manager: in the corporation, secretary and treasurer. We are incorporated for \$200,000 of which \$165,000 has been

paid and spent. Like John Paul Jones said, we have just begun to start. If it is a go, it will be a big affair. We are barely in production and it will be six months more before we are breaking anything like even. In the meantime I have troubles of my own, little time to write poetry, and sometimes wish I were off on a sailing ship one thousand miles from shore and no wind. Being the end of the month, that is the first of the next one, bills are coming in and hence my depression. I don't like the looks of the fellow in the bank, the local sheriff nor any bookkeeper. They are all kill-joys. Sincerely, Rags."

Just before going to press we received word of the death of Edwin O. Fitch, XIII-A, January 31, 1922.

1911

ORVILLE B. DENISON, *Secretary*, 63 Sidney Street, Cambridge 39, Mass.

JOHN A. HERLIHY, *Assistant Secretary*, 588 Riverside Avenue, Medford 55, Mass.

"The time has come," the Walrus said — and so it is that we sympathize with the fairly sizable group of '11 procrastinators, who just *wouldn't* send in that questionnaire, and hence have only their name and address in the Class Book.

Nineteen classmates gathered at the Walker Memorial on the first evening of February for a Class dinner and at that time the opening gun was fired in the educational campaign for eleveners to learn from department heads of changes at the Institute. Prof. Charles M. Spofford, head of the civil and sanitary departments, was the speaker of the evening and most interesting did his splendid discourse prove to be. In the absence of "friend secretary," who felt he should be at home where his wife and both children were sick with influenza, Jack Herlihy was toastmaster and during the course of the dinner he called upon R. D. Francis, a comparative stranger at 1911 functions of late, who told of his career to date, and "Fat" Merrill, the newlywed, who spent all the time he was on his feet stalling by asking the chairman questions. Just before the speaker of the evening was presented, it was voted that it was the sense of the meeting that the executive committee go ahead and use their best judgment regarding details of the Class Book.

Following the speech of Professor Spofford, the party, with the exception of Ned Hall and Francis, went downstairs to the alleys and lined up for bowling as follows:

- A. Captain O. W. Stewart, Clark, Cumings and Pepper.
- B. Captain H. G. Jenks, Buckley, Leary and McManus.
- C. Captain W. J. Pead, Jr., Comstock, Herlihy and Smith.
- D. Captain E. J. Whitcomb, Cooley, Bigelow, Merrill and Van Tassel.

Teams A and B met, as did C and D, but according to Jack Herlihy "the winners were in doubt owing to the absence of slide rules."

The following eleveners attended the Alumni banquet on January 7: Cooley, Denison, Haslam, Herlihy, Leary, McManus, Meisel, Pepper and Young.

The *New York Evening Mail* of January 30 said: "Mr. and Mrs. Max Siff, of this city, have announced the engagement of their daughter, Miss Miriam Frank Siff, to Silas Miram Ratzkoff, of Boston. Miss Siff is a graduate of Barnard College and is an active worker in the School Children's Welfare League. Mr. Ratzkoff is a graduate of the Massachusetts Institute of Technology and West Point. He was cavalry instructor in the first three officers' training camps, and is a member of the Army and Navy Club and the Army Athletic Association."

Right now let it be announced that 1911 has its first Life Member — Capt. Kanezo Goto of the Imperial Japanese Navy. Goto requested what the rate for life membership was and the secretary and assistant secretary agreed on twenty dollars (\$20.00) as a representative sum.

At the present writing (mid-March) "Mrs. Dennie" and young "Dennie, Jr." are at Tryon, North Carolina, in search of renewed strength for the young chap, who was pretty hard hit by the influenza last month.

Lloyd Cooley has a new job, being located in Philadelphia with The Barber Asphalt Paving Company, for which he is engaged in sales promotion work. — "Mike" Greenleaf, who with his associate, C. F. Krueger, has incorporated under the name of Detroit Starter Company, reports that things are fairly good at present and they have high hopes for the future. Their work is not manufacturing but rather confined to electrical service on automobiles, chiefly starting, lighting and ignition. — Harry Tisdale writes down from

Schenectady that "the January REVIEW has just come around and it makes me homesick to read of an '11 dinner in the Grill at Walker Memorial. Wish I could have been among those present, but it doesn't look now as if I would get to Boston for some time to come. I have just been given entire charge of the New York State territory outside of New York City and as I have about eighty towns to cover and about one hundred and twenty-five customers, my time is pretty well occupied."—"Bob" Morse recently wrote in that he "just saw Dick Ranger. He's got an offis all by hisself 'n everything right in the Woolworth Building."—Frank Wood wrote a while ago that "Hank" Smith expects to be in Boston in June.—E. M. Young has accepted a position teaching Mathematics at Lawrenceville School in New Jersey.

WEBSTER RICHARDSON

Part of the grim toll of a horrible hotel fire which destroyed the annex of the New Richmond Hotel at North Adams, Mass., the night of March 30, was the loss of a popular member of 1911, Webster Richardson, I. When "Rich," as we all called him, found himself trapped in his room on the fifth floor of the hotel he tied bed clothing together and slid down in an attempt to reach the roof of a building thirty feet below. He missed his footing and dropped three stories, striking on a pile of rocks and sustaining a fractured skull and multiple bruises from which he died two days later in the North Adams hospital. He was a bond salesman and had made himself a host of friends and customers through his genial personality and good humor. The secretary of course has expressed the hearty sympathy of the members of the Class to his family in Newtonville, Mass.

Rudolph Emmel, III, is around the Hub for a visit with his family in Jamaica Plains. His mining interests are at Guayaquil, Ecuador, and he plans returning there at the conclusion of his visit.—We are planning a 1911 dance at the Walker Memorial in April, due notice of which will reach classmates.

Mr. and Mrs. Joseph F. Harrington of Albany, New York, announce the arrival of Mary Elizabeth on March 9.

Mr. and Mrs. E. R. Hall of Wollaston, Mass., announce the arrival on March 19 of an "eight-ten" daughter, Jean Edson.

CHANGES OF ADDRESS

Reuben Y. Althouse, 4235 North Lockwood Avenue, Chicago, Ill.; John Taylor Arms, Greenfield Hill, Fairfield, Conn.; Philip S. Avery, 15 Ashburton Place, Boston Mass.; Oberlin S. Clark, 8 Lindale Avenue, North Weymouth, Mass.; Walter F. Connolly, 63 Manthorne Road, West Roxbury, Mass.; L. C. Cooley, 905 Peoples Savings Building, Pittsburgh, Pa.; Rufus Crane, 407 West William Street, Delaware, Ohio; Allston T. Cushing, 59 Dallas Avenue, Pittsburgh, Pa.; Lieut-Col. H. C. Davis, Jr., Picatinny Arsenal, Dover, N. J.; Raymond W. Frost, 71 Broadway, New York City; Joseph C. Fuller, Holton Street, Sewaren, N. J.; Cuthbert T. Greenleaf, 11 South Street, Woburn, Mass.; Kenneth T. Greenleaf, 2057 Euclid Avenue West, Detroit, Mich.; John P. Hart, 744 Title Insurance Building, Los Angeles, Cal.; William E. Humphreyville, Jr., 2118 Fannin Street, Houston, Texas; B. Lawrence, Upland Road, Sharon, Mass.; C. H. S. Merrill, Allerton Road, Milton, Mass.; Clyde R. Perry, American Industrial Building, Room 512, Hartford, Conn.; Webster Richardson, 109 Highland Avenue, Newtonville, Mass.; William C. Salisbury, 2529 Bryant Avenue South, Minneapolis, Minn.; John H. Scoville, 137 Springfield Road, Elizabeth, N. J.; Henry R. Snyder, Stony Creek, Conn.; To Tan Sun, care Perin & Marshall, 1107 Broadway, New York City; Harry R. Tisdale, 799 Albany Street, Schenectady, N. J.; J. A. Urquhart, 12 Sudbury Road, Concord, Mass.; Roy D. Van Alstine, 854 Elm Avenue, Long Beach, Cal.; Walter P. Welch, Oakwood Avenue, Rye, New York; Emmons J. Whitcomb, 22 Beacon Street, Boston, Mass.; Erving M. Young, Dawes House, Lawrenceville, N. J., John P. Constable, Constableville, Lewis County, N. Y.; Burgess Darrow, 122 North Portage Path, Akron, Ohio; James O. Greenan, 1737 Walnut Street, Berkeley, Calif.; Samuel L. Hates, care Proximity Print Works, Denim Branch, Greensboro, N. C.; S. H. Lawton, 50 Congress Street, Boston, Mass.; Lee R. McMillan, care Ernest A. Canere's Sons, New Orleans, La.; C. R. Perry, R 521, 30 Church Street, New York City; H. F. Shaw, 43 Orchard Street, Leominster, Mass.; H. R. Snyder, Suffolk Law School, Temple and Derne Streets, Boston, Mass.; J. A. Urquhart, 969 Chestnut Street, Manchester, N. H.

1912

RANDALL CREMER, *Secretary*, 7 The Circle, Rochelle Park, New Rochelle, N. Y.

F. J. SHEPARD, JR., *Assistant Secretary*, 568 East First Street, South Boston, Mass.

As has been brought to your attention previously, the next big event on the calendar for 1912, is the Class reunion, to be held in June, this year.

An enthusiastic meeting was held at the Engineers Club, on March 3, with sixteen men present as follows: C. Somers, IV; C. Morrow, IV; H. Merrill, X; O. Weissner, III; J. Bray, III; W. Lang, X; J. Whittlesey, II; R. Symonds, II; C. Morrill, XI; E. Tarr, VI; E. Schell, II; Watson, I; Sloam, I; Wilson, II; Kebbon, IV; Shepard, VI. After a half hour of reminiscences, it was voted to appoint a committee, consisting of Symonds, Whittlesey, Somers, Morrow, Shepard and Kebbon to report to a committee of the whole on April 7, dinner to be held at the Engineers Club, at 6.30 o'clock. Locations were discussed, and the sentiment seemed to be in favor of somewhere down the South Shore, where the water would be warm. The committee is to obtain rates and descriptive literature of the various hotels, and a place and time will be chosen on April 7.

After finishing dinner at the Engineers Club, the meeting adjourned to the Walker Memorial, to see the Harvard-Tech basket ball game. Tech won by a score of 18 to 17. The lusty shouts from the 1912 delegation undoubtedly had a great deal to do with the victory.

The secretary offers his humble apologies to Carl H. Morrill, I, by having reported his engagement in the previous issue, as Carl is positive that we were referring to another party. His protest from Greenfield, Mass., is as follows: "Sorry to spoil any of your good news items, but I must protest at being eloped with against my will, as per your extract from the *Boston Globe* in the last REVIEW. You got me wrong, 'kid,' because I am in Greenfield, Mass., and I have been since 1914 (except for a certain visit to France, courtesy U. S. A.), and haven't done any eloping unless it was in my sleep. Evidently another of my name was responsible for this fair romance. I wish him luck, and offer congratulations. As regards my rear doings, I am putting up a bluff at knowing something about building roads, and at times I get away with it.

My range extends over Franklin, Hampden and Hampshire Counties, with headquarters in Greenfield. Finally, I extend a cordial invitation to any and all Tech men who are passing through our village to call around."

We are indebted to Tomlinson, the secretary-treasurer of the Technology Club of Chicago, for the following items, regarding 1912 men in his vicinity. L. A. Bailey, who took Course IV, is an architect here, with offices in the Monadnock Block, but I have not seen him for quite a long time.—V. V. Ballard, I, has entered the engineering department of the C. B. & Q. Railroad, at 547 West Jackson Boulevard. He was in France with the Army for quite a while, and brought a French bride back with him.—F. G. Loweth has been here continuously since graduation, with the St. Paul Railroad, but left a couple of months ago to go to Cleveland where he is now fuel agent with the Cleveland Electric Illuminating Company.—E. T. Marceau, a chemical engineer, was also here for a number of years, but possibly six months ago the N. K. Fairbanks Co. moved him to their New York office where he can supervise the Gold Dust Twins more closely.—F. L. Mowry, XI, is in the Construction Department of Swift & Co. of the Union Stock Yards. He very seldom gets down to the weekly lunches of the Technology Club of Chicago, but he almost never fails to attend our summer outings or to come to an evening dinner.—J. H. Pratt, XI, is chief engineer of the Liquid Carbonic Company, 3100 South Kedzie Avenue, Chicago, and his attendance at our meetings is about on a par with Mowry's. The Liquid Carbonic Company has a number of Tech men in their employ and Pratt brought practically all of them to the Musical Clubs Concert, December 30.—Tomlinson is now in charge of the Railroad Bureau of the Portland Cement Association, and is engaged in compiling authoritative data on railroad uses of concrete. After graduating Tomlinson was for five years with the Chicago and West Indiana Railroad, becoming assistant engineer. During the war he served as captain in the Coast Artillery, at Fort Monroe.

Morash writes as follows, from the Belmont Sanitarium, Belmont, Cal.: "The REVIEW has just come to hand, which reminds me that a change of address is in order. I have entirely recovered and am as 'Fit as a Fiddle.' Gained eighteen pounds here since the middle of October, and thirty-five pounds since leaving India September 4, which gives me a total avoirdupois of one hundred and sixty pounds. Am leaving for Butte

the end of the month for a few weeks; then Chicago for a fortnight; en route to New York, intend stopping over at Schenectady briefly, to see many old friends. May take a boat directly from New York for Halifax or proceed via Boston, arriving home about the latter part of April. My present intentions are to do considerable trout fishing and camping for six weeks or so there. After that I shall be ready to go to work again to earn my daily bread, but I am through with India or the Tropics, I can assure you. I see by the REVIEW that a reunion of the Class is contemplated around the middle of June. Unfortunately I have been out of the country most of the time since graduation, and have therefore missed all the previous gatherings. No literature has come to hand as yet covering the reunion, as intimated in the Class news, and I hope the same will come to hand soon. I should like to be on hand this time, as the Lord only knows where I will be during the next ten years. Please have my address changed to Lunenburg, Nova Scotia, Canada."

Congratulations and best wishes to Springall. Every effort will be made to have the blushing bride make her first appearance before the Class at the tenth-year reunion. The *Boston Transcript* describes the affair as follows:

"Announcement has been received from Minneapolis, Minn., of the marriage of Cyrus Foss Springall of Malden and Boston, son of Dr. Thomas J. Springall, to Miss Edith Olson, daughter of Mrs. Huldah Olson, of Minneapolis. The wedding was at the home of the bride. Mr. Springall is a well-known architect and is a graduate of Technology. During the war he was a lieutenant, in the aviation section of the Navy. His bride attended the University of Minnesota and is a graduate of the Fine Arts School of Columbia University. Fred A. Abbott, formerly of Malden, was the best man and other Malden people at the wedding were Dr. Springall, the bridegroom's father, and Mrs. George A. Springall. After a wedding trip through the South, Mr. Springall and his bride will make their home at 18 Spring Street, Malden."

Professor Schell appeared in print on February 5 in the *Boston Post and Transcript* as follows: At the regular monthly dinner of the Boston Executive Club to be held at the Boston City Club tomorrow evening at six o'clock, Prof. E. H. Schell of the Massachusetts Institute of Technology will deliver an address on "The Technique of Executive Control."

John Bray, III, has come back to Boston after covering the greater part of North and South America in various mining centers, and later teaching mining engineering in Nova Scotia. He is now one of the firm of MacKay-Newcomb Company, located at High and Federal Streets, Boston, Mass. The store has lately been doubled in size and John will be able to take care of any hardware requirements you may have.—Kebbon, IV, is now located at 522 Fifth Avenue, New York City, under his own name, as an architect Harvey Benson, II, has bought the business of A. T. Thompson & Co., 15 Tremont Place, Boston, Mass., and is manufacturing high grade optical projection apparatus.

Todd Greenleaf, I, writes as follows from Moline, where he can be reached at the Kearns Building, under the firm name of Rathbun-Greenleaf Company, Engineers-Constructors:

"Your letter of the third was all that is required. I admit I have been more than delinquent in making contributions to the REVIEW and I'll offer no excuses.

I just recently have taken upon myself part of a business as junior member of the firm of Rathbun-Greenleaf Company, engineers and constructors at Moline, Illinois. Apart from the manufacture of farming implements, Moline is famed for its Swedes. While not of that ilk, I might nevertheless be able to acquire the language by stretching myself a bit. For the past five years I have been estimator and engineer with the Henry W. Horst Company, general contractors of Rock Island, Illinois, which is next-door neighbor to Moline. While there I had occasion to get a rather thorough insight into the contracting business, and accept my assurance, one needs it. My home has been in Davenport, Iowa, immediately across the river from Rock Island. Two years ago Betty Jane appeared upon the scene and now the house presents nothing but scenery most of the time.

At exceedingly wide intervals I hear from "Bab" Babcock who is in the paper pulp business at Appleton, Wisconsin. I trust this will get in the REVIEW—possibly Bab's conscience may prompt him to answer some of my letters. Last Fall Bab's household was blessed with another little miss which makes the count at two.—I used to hear occasionally from Vin Gallagher but he seems to have cut me from his list. Have a heart, Vin.—Last year I had visions of packing the family into the Dodge the latter part of this May and starting eastward for the reunion. However, now that I have a business which

requires considerable attention, I fear the vision will continue to be such. Anyway, you may be assured I'll be there in spirit."

From Professor Locke: Frank H. Curtis, II, since severing his connection with the du Pont Co. in Delaware some time ago has been spending the time at his home in East Weymouth, Mass. Incidentally he assisted at some experimental furnace work in the Tech laboratory. He has finally entered into a contract with the Braden Copper Co. and sailed about March 1, for South America. His address will be care Braden Co., Rancagua, Chile.

Henry C. Dunbar, II, has been superintendent of plants for the Smithport Extract Co. Inc., for the past two years. During the war he was a bridge officer in the Merchant Marine. Present license, second mate of ocean steam vessels, unlimited as to tonnage.

John A. Allan, XII, professor of geology at the University of Alberta sent the following:

"I. F. Morrison, II, who graduated in Civil and who is associate professor of civil engineering at the University of Alberta is at present carrying on an important line of research work on the microstructure of steel.

I am kept busily engaged in all spare moments in carrying on an investigation on the mineral resources of the Province of Alberta. I have been at this for three years, and of course have just got well started on the problems connected therewith."

The following changes of address have been sent in: Harold G. Manning, Waterbury National Bank Building, 193 Grand Street, Waterbury, Conn.; B. W. Stevens, 540 Webster Street, Needham Heights, Mass.; R. E. Wilson, 10 Avon Place, Arlington, Mass.

1913

F. D. MURDOCK, *Secretary*, 230 Chandler Street, Buffalo, N. Y.

R. CHARLES THOMPSON, *Assistant Secretary*, 120 Milk Street, Boston, Mass.

Every once in a while I wonder just how much this column means to our classmates. Ordinarily it takes a good deal of plugging to get material for it. Recently affairs have come to such a pass that without sending each man a self-addressed stamped envelope practically no news was sent in. Each one of you received, in the middle of March, a reply postal card. About five hundred were sent out and within the first week considerably less than one hundred replies were received. The tenor of the remarks was extremely gratifying. It showed that a substantial number of men are very much interested in sustaining their Class associations. This is all by the way of telling you how we stand. Perhaps when you read it you will feel that you do owe something in the way of a contribution to these notes. The debt is easily paid, with a pen, paper, a two-cent stamp, and about ten minutes' time.

Merrill J. Smith is in Toronto. He writes: "The past fifteen months I have been in Toronto, Canada. The city of Toronto has purchased the street railway, and a court of arbitration is being held to determine the price to be paid to the company for their property. There is a question as to who will get the most, the lawyers or the engineers. The firm of Jackson & Moreland by whom I am employed is rooting for the city. I like Canada and the people here very much. It's mighty nice of them to sing 'My Country, 'Tis of Thee,' on all public occasions."

Ad C. Cardinal, II, is cheerful in the face of adversity. Read what he says: "I am still in the silk business, and 'still' in the full sense of the word, as there is not much doing. Have not seen any Tech fellows this year except my brother who is a sophomore. Hope to meet a few others during spring if I get to Boston for the show. Am yet married; very happy, and can so far claim no more exemption than being married on my income tax report."

Arthur W. Carpenter, V, has left the Goodyear Company and has charge of a plant in Baltimore, making rubber heels.—A. Corrubia is practising architecture in St. Louis, Mo.—F. C. Weiss, VI, is still working for the Alabama Power Company and expects to build every transmission line that will be extended from Muscle Shoals.—F. B. Morton, V, is engaged in research and development work with the du Pont Company at Parlin, N. J.—E. L. Wadsworth is still selling hardware and boat supplies at Eastport, Maine.

From Detroit, H. S. Currier, II, notes: "Trying to 'bust into' telephone engineering with Michigan State Telephone Company since auto business went 'flooyey.' About

'13 men here don't seem to turn out to Alumni meetings. Not very regular myself. How about that ten-year reunion?"

Some men are lucky. Read what happened to C. F. Haglin, Jr.: "Married Miss Blackburn October 27, 1918. Have baby girl, Virginia Ruth Haglin, born September 11, 1920. Spent last summer in Europe. Vice-president of C. F. Haglin & Sons Co., general contractors, Minneapolis, Minn."

Please note Bob Nichols wails: "Have not seen nor heard from a thirteener in months. Am feeling like a reunion."—Burton L. Cushing, II, has two announcements, one of the birth of a son and another of his election as park commissioner of the town of Rockland, Mass.—A. M. Loeb, II, is very busy trying to make a living for his wife and two boys. That's a commendable occupation.—H. A. Burr, I, is still assistant bridge engineer with the Tennessee Highway Commission.—E. G. DeCoen is stationed at Camp Bragg, N. C.—P. V. Burt notes: "Nothing new in this neck of the woods. Bill Mattson and I are still 'sleuthing' statistics at Babson's. Am always interested in hearing from fellows from Class notes, especially those away from Boston."

David Stern contributes: "Working like 'Hail Columbia' trying to 'can' every available prospect. (I am in the can manufacturing game.) Additionally busy now with plans for our new factory. Have two children, a girl of six and a boy of two; the latter is now preparing to enter Tech."

You who are interested in overcoming engineering difficulties will enjoy the following from H. F. Sutter: "Still with the Pioneer Construction Company of Kansas City. Now building some bridges under novel conditions. These bridges are over the Cimarron River, the flow below the surface being quicksand, above the surface a desert sandstorm, no water in sight but everything in motion."

Read Rusty Sage's pert comment: "I am working like the devil trying to find some industry with a building inclination. They are not so rare as six months ago, but are still scarcer than hens' teeth. The Sage family has increased to six. The golf game got pretty good but just slipped into reverse. If I don't improve soon I shall throw my clubs into Lost Lake and six months later buy a new set."—W. E. Clancy is still the chief chemist of the Hood Rubber Company.

Prescott V. Kelly, I, is at Birmingham. He writes:

"I will break the silence of eight years and give you what little '13 dope I have. We have two '13 men here in Birmingham besides myself, Julian Adler, who is chief engineer of the Corona Coal Company, and Weiss, who functions as transmission expert for the Alabama Power Company and who comes to life about once a year as secretary of the local M. I. T. Association.

I had a letter a short time ago from Bob Daggett, who is still with the Linde Air Products Corporation in New York. He has been married about two years.

I came here to Birmingham about one and a half years ago as Southern sales manager for this company, and have charge of the distribution of our products in ten of the Southern States. Except in special instances we work through agents, and my job is to keep them producing. As most of us have had occasion to learn, last year was very lean, but I managed to make this office pay its own way, and we are expecting big things in the coming construction season.

I am now 'possessed' of two children, a girl five years old and a boy, two.

This job has its drawbacks sometimes in the summer, but it is very nice to run down through Florida in the winter and disport myself among the plutocrats.

If any of the '13 bunch ever get down this way, you might tip them off that prohibition does not prohibit in this section. If they are doubtful of this I can easily demonstrate it."

Here is a pretty good explanation from Arthur E. Hirst, of public spirit. He shows what can be done by one who wants to do something without having something spectacular to indulge his vanity. He writes:

"Of course the matter of Class notes concerns me, as it concerns all of us '13 men. I imagine that lots of the fellows feel as I do, to wit, nothing worth writing about has transpired in my existence.

I wonder if any other '13 man is connected with the chemical side of the textile industry? If so, he probably is acquainted, or ought to be, with the New American Association of Textile Chemists and Colorists. The association was organized in Boston last fall and promises to be an organization of national interest, and every man in any technical

way engaged in the application of dyestuffs or chemicals to cotton, wool, or silk should be a member. We already have local sections in Boston, Providence and New York. The object of the association is to extend interest and information in textile matters, and to carry on research work. I have the honor to be a member of the council and of the research committee, which meets every month in Boston. Wallace Murray, '12, is also a member of the research committee.

As far as my job goes, I still manage to hold on to the one I started with, with a little more tacked on, as chief chemist and assistant superintendent at the American Printing Company. Business isn't quite as lively as it was, although we are getting out a million yards a day of printed and dyed goods.

Our Tech Club of Fall River has come to life again, and they've stuck me with the job of president.

I'd be glad to have a call from any of the fellows who might stop here or come through on the old Fall River Line. A trip through the print works might be interesting."

Malcolm Lewis has the following to say: "Nestle's Food Company had to cut. Since January 1, 1922, I have been health officer of Hackensack, N. J., at a better salary than Nestle's paid me, and I'm my own basso (except at home); new address, 332 State Street, Hackensack, N. J. A year and a half ago I sent Thompson announcement of the arrival of Sylvia Jane Lewis. Never saw it in the notes. Is it any wonder that they shrink? With best regards, and the hope that you have started something." We beg Malcolm's pardon for the oversight.

Harty, IV, was married June 18 and likes it, he states. He notes that Matthews, IV, is with Stone & Williams in New York and Stucklem, IV, is with Street & Company, Boston, real estate brokers.

We can always count on Ross Sampson. He contributes the following:

"Your cocky notice of the fourteenth duly received. It was successful in my case — it got a rise out of me.

Yes, the matter does interest me.

I can't tell you that I'm engaged. It has gone farther than that. I can't tell you that I am the proud father of a bouncing eight-pound boy. It has gone farther than that. My two young hopefuls are having their tonsils and adenoids removed this week and are being carefully groomed for the classes of 1935 and 1936. If I don't attend gymnasium regularly, they will soon be putting it all over me at that, etc., etc. This is not the kind of news you want for the REVIEW, but it's about all that goes to make up the life of a foundryman."

Note what Bob Weeks says: "Your postal is the right idea. You have been doing your share and more too for 1913, and the least the rest of us can do is to write a little news several times a year. For my part I will try to keep you posted about those in Chicago and to help make up for my inactivity in these past eight years.

Chicago has an enthusiastic Technology Club. The annual dinner was held at the Chicago Engineers Club this last Tuesday and I enjoyed a real talk by Everett Morss. Everyone is anxious to see a president installed but realizes it is a big undertaking and requires time and study.

1913 has a few representatives in Chicago. Larry Hart is here with the Johns-Manville Company as sales manager, and Dutch Franzheim with C. Howard Crave, architect. Dutch is doing some splendid work in the way of some fine new buildings for Chicago.

Since leaving the Army in 1919 I have been with the Pennsylvania Railroad in several capacities. Of course I wanted to get back into electrification, but with no new work in that line I took what was available. The start was in the stores department and later the purchasing department. At present I'm connected with the purchasing department of the Northwestern Region of the Pennsylvania Railroad with headquarters at Chicago. Purchasing is interesting if you want to make it so, and can use a technically trained man to advantage. There seems to be a tendency in some quarters toward technically trained men in purchasing work. It is a good proposition.

My work involves some traveling, but so far nothing as far East as Boston.

Our family is now four, the parents and two girls, Mary Frances, age four and one half, and Lucy, age two."

Ben Munch, II, is still making automobile manifolds of tubing in Southington, Conn. — S. H. Davis was married to Rebecca Herman, of Boston, Mass., on January 31, 1922. — L. E. Wright has "changed jobs. Am now serving the people of Cleveland a pure spring

water. The lake furnishes water for all purposes except drinking, and with a territory as large as Cleveland we find there are still a large number who drink water."

Harry G. Burnham, a newlywed, notes: "Married, February 4, to Mildred E. Dallinger. I see Gilbert Pardy and Greenville Horsch once in a while, but that is about all. You can't expect too much from any one who has been married only six weeks."

J. W. Livingston is with the National Aniline and Chemical Company at Buffalo. He has four kiddies, three boys and one girl, and is doing well.—Capt. E. C. Gere sails from Manila about April 1, bound home via China, India, Egypt, Palestine, Italy, France, Germany, England and Scotland.—R. J. Tullar, II, is still with the Victor Talking Machine Company, but, as he wittily remarks, is breaking no records.

B. F. Thomas, VI, emphasizes his interest in Class notes. He wants to know if arrangements for June, 1923, have been started. We wish to assure him that a good deal has been started in the minds of several who are responsible for what will be pulled off then, and it will not be long before we have something definite for your consideration.

C. C. Peirce has been engaged in business other than the architectural profession since the close of the war, but soon expects to be opening an architectural office for himself. He has been a foreign resident for three years. Although he was with our Class a short time, he wrote the following:

"In reply to your post card. I was for so short a time a member of your illustrious Class, 1913, that I am afraid any news of me would hardly be of great interest to the Class at large. I am interested in the success of your work and feel you will readily understand the situation in my case. I've been, until recently, a resident of Paris, France, where I was interested in automobiles.

I expect to return there for a few months this coming spring and summer, and I'd be glad to have any visiting members call me up if they care to do so.

I expect to be practising architecture, however, in Philadelphia very shortly on my own account."

We are sorry to learn that L. Bevan has just been operated on for appendicitis and hope for his complete recovery.—Read Louisa Norton's, who was Effie L. Macdonald, ambition: "I am still on the job here at the hospital and will be until the first of June. Then I expect to settle down to a house and garden. Exciting, isn't it?"—L. H. Hoyt was back at the Institute. He notes: "Just put in two months back at M. I. T., doing graduate work. Can't say it seemed like old times except for the 'grind.'"—R. H. North writes: "Am still with du Pont's at Fairfield. Make rubber top material. Live at Rowayton, Conn., and chickens on the side (not what you mean). About P. C. Warner. He is married at last."

John H. Hession, I, is still making ironite waterproofing.—F. T. Smith, XIV, is the father of Dorothea, a perfect sixteen-pound peach, six months old. His pride is pardonable.—S. W. Parker notes: "Married, no children. Live in Watertown. Work for Wheelock-Lovejoy & Co., Inc., of Cambridge, Mass., steel business."—We have a surprising number of politicians. To our long list we can add the town treasurer of Glastonbury, Conn., in the person of R. O. Rider.—R. L. Thomas is still on hand, even though he has nothing new to report.

Class notes do not interest Charles Edison. I fancy they rather bore him.—W. L. Whitehead has just started on a business trip to Australia, and expects to be away for a year or two.

A word from J. M. Hastings, Jr. "You win. As a matter of fact the matter doesn't particularly interest me, but I think it ought to. Therefore, I assume that the matter does concern me, and here is my bit about myself: Married April 12, 1921, to Marian D., daughter of Judge B. J. Shove, Syracuse (sounds like an obituary, but is just the opposite). Still with Semet-Solvay and making ends meet to some extent. I don't envy your job as secretary, but more power to you."

H. S. McLellan, I, notes, "Am still located with the New England Telephone and Telegraph Company, engineering department. Also still unmarried and carefree."—Joe Strachan, I, is moving his company office. Also he is moving himself and family into a new house in Ridgeway, N. J.—A. Vogel, IV, is still engineer in charge of the plant engineering department of the General Electric Company of Schenectady, N. Y.

M. W. Merrill, XIV, notes: "Am still doing business at the same old stand, copper game looking up a bit all the time. Incidentally am going to join the happy family of benedicts on April 22. The leading lady in this new venture is Miss Alice M. Walker of

Providence, R. I. I heard from L. J. Renfrew, XIV; he is with Carnegie Steel Company, Wilson, Penn."

The following comes from Earl Caldwell, X: "Your postal just received and contents noted with much interest. Indeed I am very much concerned with the REVIEW, but here is my story. As to the news, there is not very much. I am still in business for myself here with my brother-in-law, and while it is subject to the same laws as any business, the same ups and downs, we are getting along very well. During these times just passed it has been very nice to be in for yourself. Now for the big news. 'Mons' Gagnon, the class cusser, blew in a few weeks ago and is now a resident of this town. He is doing reconstruction work with the Corticelli Silk people and is virtually 'super' of one of their mills. I have not seen him for three weeks now and I understand that he is in Needham (his home) laid up with the gripe. This is all now. Will be very glad to hear from you, Fred."

Miles Langley, I, was taken into his firm this year. He is with the Portland Packing Company. — W. A. Bryant, I, notes, "Business flat, although beginning to improve, and small addition to the building of the American Radio and Research Company has just been designed by me. Prospects look good now. Got the wireless telephone bug in my bonnet now. Hope to have a good receiving set soon and get all the news running. At present engaged in rewriting part of the Brookline building law. We hope to have the best law going within a year." — E. W. Davis considers his life prosaic. Even so we are glad to have him say something about it. He writes: "My life has not been very romantic since I left Tech. I have had one job, one wife and one kid."

Bill Brewster, II, is one of our genuine standbys. He writes: "Yours imploring me to be square with myself as a man of decision received 15 seconds ago and trust I am now squared. Also I do care a damn or two about the class notes which 'has' shrunk as you say, and you a literary guy, too. My family remains at the same numerical strength, but is increasing (meaning the three youngest members) in bulk and weight, which is as it should be. See H. D. Peck once in a while. I thought a while ago he was going to get me a patent that would make my fortune, but instead he found that the same idea identically had been patented in 1869."

B. Franklin Howland, I, writes as follows: "I am now chief, engineering department of C. Brewer & Co. Ltd., and my work takes me around the group of islands but for the year 1922 my address will be Hilo Sugar Co., Hilo, Hawaii."

Leon Parsons was good enough to send in some news about classmates he has seen lately. "Phil Terry is located in Boston, working for Spaulding-Morse, manufacturers of blueprint and similar materials. Morton has gone with du Pont in connection with the development and sales work incidental to a process in which he is interested. Collins was at the Institute a short time ago and my chief recollection of his visit is the extremely large amount of fat which he has put on since graduation. He was by no means deficient in weight when he graduated. Conservatively speaking, I would say that he weighs about a ton."

J. C. MacKinnon, who was an instructor in physics at the Institute, lost his wife recently. Our deep sympathy goes out to Mac.

The secretary was very much pleased to receive from Dr. Horsch a letter with some good suggestions about gathering our news for these notes. Incidentally he sent in the following items.—"Leon Parsons is doing excellent work as assistant director of the Research Laboratory of Applied Chemistry at the Stute. He also is a deservedly happy father of a daughter, Miriam, born October 1, 1921. You should hear Lee call himself 'papa.' — A. L. Townsend, II, is instructor in mechanical engineering and glibly answers a thousand questions per minute. Life goes calmly on with him, he says — he can't even confess to being either a father or married. He has run into several '13 men lately, however. — 'Bill' Brewster dropped in the other day as debonair as ever, looking after tests. He is with the Plymouth Cordage Company, occupying a responsible position.— Frank Mahoney, X, 'Jumbo' is still making industrial alcohol and driving a Peerless. Like Townsend, he is still a bachelor — having too good a time. A friend of Townsend's took a 'Blimp' flight in Texas recently. Looking at the instrument board, he noticed that the instruments were made by L. L. Custer, II."

F. B. Williams writes, "Yes, am interested in Class notes, but have little to offer that would interest any of the others. I don't see many '13 men, but do meet a number of the undergrads. The plant where I am located is a show place for the man taking foundry at the Stute, and every week or so during the 'open season' Jerry O'Mal and Claude

Clarke bring in a bunch of young hopefuls to look us over. The works are rather dull now — five days a week and but thirty-eight to forty tons a day, and a little brass. Was married last October to Mary Adeh Boynton, sister of Boynton, '13. Am willing to admit that I now have a good reason for being glad that I attended M. I. T. Got word a few weeks ago from G. H. Q. that during the 'next emergency' my station will be Watertown Arsenal. Am all excited for I spent two very martial years there. Wish I had something interesting and worth putting into the REVIEW. Hope you are not so hard up for news that you have to use any of this."

From the letterhead over his signature we learn that Ed Germain is manager of sales for the Bethlehem Shipbuilding Corporation, with offices at 25 Broadway, New York.— J. W. Lovell is still with the Collyer Insulated Wire Company, Pawtucket, R. I. He notes that he is bowling a bit and has attained the remarkable score of 160 with bottle pins. He wants to know who can beat it.

D. V. Nason notes: "No change from last; buyer raw material Joe Helburn Thompson Company, sheepskin manufacturers, Salem, Mass. Damn sight easier to make sheepskins than to get one from Tech." — Kenneth Franzheim has gone into partnership with C. Howard Crane, architect, of Chicago. — S. S. Crocker, Jr., is with J. G. Alden, the naval architect, of Boston. — E. N. Taylor reports that he is just living, that's all.

Fred Lane contributes the following: "I hope you will pardon this hasty note, but your card of March 14 has just reached me and I note that replies are desired by March 22. I am not quite sure what I told you in my last report, but up to January 1, I was stationed at the Pittsburgh Station of the Bureau of Mines with the title of organic chemist. Despite the title my work at Pittsburgh was more nearly along the lines of physical chemistry than organic. The first of this year saw me transferred to the Washington office, where I have charge of the chemical laboratory, and handle the chemical end of the correspondence for the petroleum division. I manage to keep busy most of the time. I have not been here long enough to meet any Tech men, but only today I received a notice from the local M. I. T. Club inviting me to join with them. This I shall do at once. I realize this is pretty meagre dope, but I hate to see the Class notes go to the boards. Moreover, I enjoy reading these notes from old classmates even though they contain only commonplace stuff."

Al Ranney writes that he has heard from N. S. Salibi who is coming back to the United States for a year's leave after six years in the government service in the Philippine Islands. Al is again a member of the firm DePuy & Ranney. — R. F. Braly is in the concrete products business at Spring Lake, New Jersey.— Read the way Don Van Deusen puts it: "Nothing of interest. But because nothing interesting happens to me, does not make me less interested." — H. S. Crocker has practically completed the remodeling of the sewerage system of Brockton, Mass. — P. E. Warner notes: "Transferred from Reserve Station to Regular Navy last fall. Still am aide to Commandant at Pensacola."

From Calcutta comes the news of the birth of F. H. Achard, Jr. — From the *New York Times* we learn of the engagement of R. B. Haynes, I, to Miss Edith L. Williams of New York City.

Here is a regular letter from our old horse "Mons" Gagnon: "Here we are off. To all of my well wishers, etc. Heard from 'Our John Farwell' in France and Germany last fall. He requests me to get out a list of jobs on which I have worked so that I can assume his title of champion job coverer of the Class. So follow here a few of the jobs I have had in the last nine years. 1. Edible Products Co. of Bayonne, N. J., in 1913 as shift foreman and night superintendent. This was a cotton oil lard factory. 2. Vermont Marble Co. of Proctor, Vt., in 1913 to 1918 as assistant mechanical and electrical engineer, machine designer, maintenance and upkeep engineer, production man, assistant superintendent of mills, inspector, supervisor, division superintendent, salvage engineer, and finally out. In all about seven different jobs in various towns. 3. High school teacher in Springfield, Vt., 1918 for a few months. 4. Fellows Gear Shaper in Springfield, Vt., 1918 on production work for a few months. 5. Hunter Machine Company of North Adams, Mass., as production superintendent and later as personnel director, successfully running an industrial democracy which later was fired out by the company and the men, 1918 to 1920. 6. Worcester Pressed Steel of Worcester, Mass., who make a fine line of pressed still products, 1920 to end of year, as so-called assistant plant engineer, on power, heat and light, etc. 7. Gamewell Fire Alarm Telegraph Company of Newton Upper Falls, as sales engineer and on production work, the slowest company of them all, 1920 to

November 1921. 8. January, 1922, with the Corticelli Silk Company of Leeds, Mass., as mill manager in full charge of mills and allied buildings and equipment.

Forgot to tell you people that I was married in 1917 or thereabouts. Anyhow we are both *boss* and do as we delightfully please. Have met very few of the fellows in my wanderings. Saw Ernest Kerr and one or two others, but except in rare instances I seldom meet any Tech men. Have a very limited circle of correspondents, but can't seem to keep up even with a few. The most important of them now is my best girl at home. I believe Runt Leob owes me a letter or two, think Kem Hamilton is square, but Our John Farwell is behind and one or two others. Will try and have some real news for you in the next issue of 'the 1913 Boston American.'

You will enjoy Ken Blake's wit in the following: "No guy can use that sort of language on me and get away with it. It's a sign for a fight unless you 'smile when you call me that.' Really now you ought to use the next page on your 'Professional Letter Writer.' Why, this card of yours went to my home address and they were so shocked that they sent it to me in an envelope rather than expose you to the public. You remind me of the fellow who was learning to write and had been instructed to put a kick in the first line of his story, so he began 'Hell,' said the Countess, who up to this time had taken no part in the conversation. If I'd known you were going to use the whip on us like this I'd have voted 'agin' you for permanent secretary. Yea, I know what you're going to say. If you'd known the sort of gang we were you'd have flunked out to graduate with a good Class. But seriously, what is a fellow going to do that has nothing to report, no new additions, no change of jobs, no great inventions to brighten the world. All I can do is answer 'present' when my name is called. As good old Professor Talbot used to say 'In our last lecture,' we, editorially speaking, were superintendent of yarn dyeing in Cheney Brothers Silk Mill. That's a far cry from electrochemistry, but it all works in to good advantage. We still are 'super' after a year of Republican administration, and hope to be long enough to pay the last installment on the 'fliver.' It takes all the patience a man has to convert a bunch of old dyers to modern practice, and scientific control. That ends my story. The next time you buy a Cheney necktie or silk shirt you can think of me. Here's hoping it doesn't fade or run or disgrace me in any way.

Not long ago I ran across the first '13 men since I won the war. We were organizing the American Association of Textile Chemists and Colorists. One of the leaders was A. E. Hirst. That was quite a reunion, for you will remember our junior balloting made him the 'Sourest' member of the Class with me for runner-up. Incidentally he is probably too modest to tell you that he was elected a member of the council of that society. In the group also was Morrison of Course V. There are plenty of Tech men down here doing good work, but '13 has not run in other than myself. Several of last year's men are on my list so we keep the 'home fires burning' occasionally. Well Fred, you will note I am still 'writing my own,' so hoping you are the same."

Read what Ira Knight has to say: "Your card arrived this morning, and I am going to sit right down and reply before it gets buried too deep. You ask whether I, as a 1913 man, care anything about the Class notes. The best answer I can give to that is that those self same notes are the first thing I always turn to when I open the REVIEW and I feel sort of cheated when I don't find much about 1913. I can readily appreciate that being Class secretary is far from being all honor and glory, and I wonder that you are able to get anything at all at times. I'm afraid I won't rate very high as a news item, but the desperate tone of your card made me feel that I wanted to write and say 'howdy' at least. I don't believe I have seen you since that night I called on you in Hartford just before you left there.

You may recall that I was at Tech only two years, having come there for some graduate work after finishing a course at Brown. I took one or two courses with 1912 men and one or two with 1913 men, and most of my other work was outside the Stute, so that with the exception of a few graduates, I really did not get as intimately acquainted as I would have had I been in a regular four-year course. At the same time I like to hear through the Class notes that 1913 is holding up its end of things even though I can't always place a lot of the fellows I am reading about.

I am still with the General Fire Extinguisher Company with the title of electrical engineer, which by the way covers a multitude of sins. My work is mostly in the line of experiment and development of new apparatus, such, for instance, as special automatic

control for electrically driven pumps for sprinkler service, electrical supervisory devices, etc. The work is varied and interesting.

I can't remember whether or not I reported to you last winter the unfortunate news of the sad loss of my wife in the fall of 1920, as the result of the birth of a son. It was a tough blow and the world doesn't look quite the same any more, but I have the consolation of a healthy little youngster eighteen months old last Sunday. I am hoping he will make a great engineer; so far he is exhibiting more marked tendencies toward the prize fighting ring. I'm sure he can trim any three-year-old going. This has run along into quite a letter. I hope your cards bear fruit and that life as secretary of 1913 is made easier for you and that some of the fellows living wild and woolly lives in China, India, Mexico, etc., will speak up and turn in something of real interest to the rest of the Class."

1914

H. B. RICHMOND, *Secretary*, 73 Harlow Street, Arlington, Mass.

G. K. PERLEY, *Assistant Secretary*, 45 Hill Side Terrace, Belmont, Mass.

Luncheon, First Tuesday in Each Month,

Healy's, 642 Washington Street, Boston, Mass.

It never rains but it pours, it never pours but the roof leaks. Or whatever the proverb says! This is the way it has seemed to the secretary this winter. After explaining in the past two issues why he had been crowded for time because of the great step he had taken, it sounds like some of the excuses we used to give to the dean to say that business has been rushing during the past three months so that little time has been left for Class notes. Believe it or not, this is the case. Since he returned from the great European tour of 1918 your secretary has been with the General Radio Company of Cambridge. Up until December of last year, it has been real up-hill work. While the other Fourteeners were making millions in tires, motors, etc., the secretary had to be content with a business which was just holding its own. Almost as if by magic, conditions changed in December last. The national interest in radio seems to have seized everyone. It has been as intense a winter as can be imagined. As this is only a fad and will soon pass off, there will be plenty of time for getting out a good list of notes in the future issues of the REVIEW. In order to start it off right, a letter is going to be sent out early in April and it is urgently asked that every Fourteener reply, even if only by a short postscript.

The annual alumni dinner was held at Walker Memorial on January 7. Six of our Class were present. Although the number was small, we had a very enjoyable evening. Those present were Ambler, I, MacKenzie, II, Stump, II, Corney, VI, Judge, VI, Richmond, VI. Considerable interest is still being shown in our monthly luncheons. Although the weather was unfavorable on the January 3 luncheon, we had eight present. On February 7, twelve were present and on March 7, eight. Fourteeners around Boston should make an effort to attend these informal meetings. Those who have been present will assure you that a good time is awaiting you.

Cards have been received from Osborne, I, and Crocker, XIV, announcing new arrivals to their respective families. Phyllis Marie Osborne registered on January 2 and Ernest Charlton Crocker, Jr. on February 9. The only item in the matrimonial line which has been received is that announcing the engagement of Currier, III. *The Boston Transcript* of November 26 contains the following notice: "Announcement is made by Dr. and Mrs. Charles R. Richardson of 759 Comstock Avenue, Syracuse, N. Y., of the engagement of their daughter, Miss Evelyn Dee Richardson, to Prof. Louis Wade Currier of South Acton. The announcement was made at a luncheon given by Mrs. Edward L. Emmons in her home at 755 Comstock Avenue, Syracuse. Miss Richardson is a junior in the College of Liberal Arts, Syracuse University. For the past two years she has been a reporter on the *Daily Orange*. She is a member of the Young Women's Christian Association and the Woman's League and is also affiliated with the Sigma Kappa Sorority. Professor Currier, a graduate of the Massachusetts Institute of Technology, has taught at Cornell University, also at the University of Idaho, Northwestern University and the Massachusetts Institute of Technology. He is at present assistant professor of mineralogy at

Syracuse University. He is a member of the Alpha Chi Sigma." Word has since been received that the wedding took place on December 8.

Walter R. Keith, X, has come into prominence with the new rubber company organized by Mr. Seiberling, formerly of the Goodyear Tire and Rubber Company. The *Ogonto, Wisconsin, Republican* of December 29 contained the following about Keith: "Walter R. Keith, son of Mr. and Mrs. C. R. Keith of this city, is mentioned prominently in a prospectus issued by the Seiberling Rubber Company of Akron, Ohio, a new firm in which Mr. Keith is a staff member. The Seiberling at the head of the new firm was formerly head of the Goodyear Tire and Rubber Company. When the recent reorganization of the latter company took place, Seiberling was relieved of his official duties with the firm by the interests which took it over and at once set about organizing his own company. The prospectus issued by the Seiberling company has the following to say about Walter Keith: 'Mr. Keith is a graduate of Boston College of Technology and has been connected with the chemical and product design department of the Goodyear Tire and Rubber Company. His experience with that company has been along various lines and he comes to us well equipped to fill his position here.'"

Ambler, I, has returned to Boston after an absence of several years. He was formerly with the Solvay Process Company of Kansas. After leaving the Solvay Company, Ambler went out to the Pacific Coast in an automobile and returned to Boston in the same manner. He can tell of many thrills during the trip.—Louis Charm, VI, is as enterprising as ever. He has recently organized the Industrial Electrical Company and is located at Boston, Mass. He has been doing several contracting jobs. This fall he wired a large garage in Cambridge which had just been constructed by Van Etten, I. The garage is called the "Technology Garage," but has nothing to do with Technology except that two loyal Technology men were active in its construction.—A short while ago your secretary received a very cordial letter from our president, Buck Dorrance. Buck reports that the soup business is rather poor. It is suggested that all Fourteeners instruct their wives to buy a can of Campbell's and help boom the soup business.

Howard Borden, I, is still making Edison records at Orange, N. J., and is doing his best to keep out of the great Edison's sight. Howard advises us that if any of the famous Edison questionnaires start coming his way that he will be corresponding with the Tech employment bureau.—Percy McCullough, VI, is still with the Bemis Brothers Bag Company. He is, however, with one of their subsidiaries, namely, the Home Cotton Mills at St. Louis.—Zecha, VI, who has been running a storage battery service station in Worcester, writes that he is anticipating selling out in the near future. No word has been received from him indicating what line of business he intends to go into. Zech has tried about all of them, so pretty soon he will be able to pick the kind he wants.—K. C. Mason, VI, is one of the few men in our Class who has stayed with the company he originally went with. He is with the Edison Electric Illuminating Company of Brockton, Mass. "Casey" does not say much about himself, but one of these days we will find him at the head of the Brockton or some other large electric operating company.

Alden Waitt, V, has recently been promoted to a captain in the Chemical Warfare Service. Alden has been working very hard in the past year at the Edgewood Arsenal. He claims to have been working about twenty-five out of the twenty-four hours each day. Knowing Alden we can well believe this. One of his important duties has been the editing of the Chemical Warfare paper, the official publication of the Chemical Warfare Service. It is a very creditable sheet and undoubtedly previous work on *The Tech* has been of great assistance to him.

Just before sending these notes in, your secretary met J. W. Hines, VI, in New York. Hinnie volunteered the glad news that next summer he, too, is going to join the Benedict class. The fortunate young lady is Miss Mildred Warren of California. This explains Hinnie's long vacation in the West last year. Hinnie also said that the Fourteeners with the New York Telephone organization were all present or accounted for and that they were assisting the American Telephone and Telegraph to maintain its 9 per cent dividend rate. In fact it is reported that it was their efficiency that made this increase of dividend rate possible.

The *Pittsburgh Gazette* of February 28 contained the following announcement regarding L. B. Duff, III: "Captain Duff, Pittsburgh engineer, one of four engineer officers chosen from the entire country to take a special course of instruction for reserve officers, left yesterday for Camp A. A. Humphreys, Virginia, to attend the course. After the comple

tion of the course the four engineers will be consulted on the policy of permanent training for the engineering branch of the organized reserves. Captain Duff is a member of the firm of Samuel E. & Levi Bird Duff, consulting engineers."

ADDRESS CHANGES

H. A. Amber, I, 207 Washington Street, Winchester, Mass.; H. J. Baker, VI, 84 State Street, Boston, Mass.; P. F. Benedict, I, 66 Newport Street, Arlington 74, Mass.; H. G. Borden, I, 61 Hollywood Avenue, East Orange, N. J.; A. P. Brown, II, 2135 Spruce Street, Philadelphia, Penn.; C. H. Brown, X, 129 East Lemon Street, Lancaster, Penn.; H. S. Busby, XIII, 53 Hudson Street, Manchester, Conn.; Ross Campbell, X, 151 Allyn Street, Holyoke, Mass.; L. W. Currier, III, Syracuse University, Syracuse, N. Y.; R. P. Dinsmore, X, 29 Dodge Avenue, Akron, Ohio; H. L. Gardner, I, 946 South Flower Street, Los Angeles, Cal.; J. E. W. Giffels, II, Mohican Hotel, New London, Conn.; A. E. Hanson, VI, 4526 Thirteenth Street, N. W., Washington, D. C.; H. A. Morrison, II, 817 Cleveland Avenue, Cincinnati, Ohio; W. L. McPherrin, II, 1919 East Eleventh Street, Kansas City, Mo.; J. C. Potter, VI, 1840 Lampson Road, Cleveland, Ohio; J. B. Reber, II, 156 North Street, Auburn, N. Y.; L. M. Richardson, I, Aberthaw Construction Company, 27 School Street, Boston, Mass.; J. A. Root, IV, Main Street, Hingham, Mass.; C. P. Ross, III, care United States Geological Survey, Washington, D. C.; B. H. Waterbury, II, 517 Eleventh Street, Franklin, Penn.

1915

FRANCIS P. SCULLY, *Secretary*, 70 West Chippewa Street, Buffalo, N. Y.

HOWARD C. THOMAS, *Assistant Secretary*, 100 Floral Street, Newton Highlands, Mass.

As this letter is due March 15 and as it is now the twenty-first we suppose that it is time to sit down and get it off our chest so that we can go and finish the dishes. We harbored the pleasant thoughts for a short while, that the secretary was going to do his own dirty work as he was here in Boston last week, but he tore back to Buffalo and left his notes here. However, he expects to return to Boston permanently, April 1, so from then on you can look for something interesting.

As a result of what we wrote in the last letter, we are going to be very careful what we say this month, as we have spent most of the time keeping out of Henry Sheils' way. Speaking of Henry, he did manage to get the information to us that William James Sheils was born February 16. Henry is quite proud of this addition to his family, as it squares him with Larry Quirk, whose son, William Joseph, arrived January 2, 1922. It looks as if it were going to be a close race. We have already extended the best wishes of the Class to these proud fathers and their families. While we are speaking of love in a cottage we have a clipping from the *Newton Graphic* and the *Boston Transcript*, which is another good paper, announcing the engagement of Mrs. Dorothy W. Evans of Newton Centre, Mass., to Ernest J. Weaver, II. It will be remembered that "Ernie" served thirteen months overseas as a captain in the 301st Engineers. No date has been set for the wedding. (Friend wife says that he ought to be all set with that experience!) Speaking of the war, another one of our classmates who served overseas as a lieutenant in the air service, Hubert S. James, IV, has gone and done it. The engagement was announced of Miss Sally Hollis, daughter of Mr. and Mrs. James Edward Hollis, of Boston, to Hubert S. James, of Brookline. Our information comes from the usually reliable *Boston Transcript*.

Another classmate, whom we met when we were eating at Waldorf's, was John F. Wostrel, VI. He is now with the State University Extension, having charge of some of their courses. He proudly told me of his daughter Joan, now six weeks old. Another classmate that we met on the street was N. S. Klink, I. Klink had the courage of his convictions — left Charles T. Main's and started in for himself as engineer and architect in the Little Building. He said that business was very good and he was looking forward to a prosperous season.

The last time that we saw Napoleon Rooney he told us that J. Ginsberg, II, was in the business of making a form of stop signal for the rear of automobiles. George said that he was doing very well. George also said that while he was at home sick, a few weeks ago, young Andy, better known as Hovey or A. H. Anderson, I, called up and said that he was

coming out to see him. No one had heard from Andy since he came back from South America last year, so George was very much surprised to hear his sweet voice. Andy was in the North Station and as George lives in Somerville, about five minutes the other side of Sullivan Square, Andy should have been out there in about fifteen minutes but instead it was an hour and twenty minutes before he showed up. Andy said that the conductor had carried him by and taken him to Medford and then given him a nickel to ride back. We suppose Andy was in some corner where the conductor couldn't see him, because Andy had the directions written down and had given them to the conductor when he got on. Andy expects to go back to New York to work in the compressed air on the new vehicular tunnel. More power to his fighting spirit!

As representative of the Class, we went to the annual dinner held in the Walker Memorial, January 7. There were eight members of the class there, which was seven more than we expected to see. We don't know why, but the local men seem to take very little interest in this event. The others present were: Wayne D. Bradley, V; G. Harold Warfield, I; P. J. Munn, I; C. T. Blackmore, VI; R. Loring Hayward, I; Daniel J. Danker, A. E. Sampson, V. It will be seen that Course I maintained its usual good percentage by having an average of fifty per cent.

We received the usual contribution from Jim Tobey, II. It was quite short this time, being a circular sent out by the Washington Society of M. I. T. It tells about the weekly luncheons held at the University Club every Friday at 12.30. Every Tech man is requested to attend these informal meetings when in Washington. The University Club is at Fifteenth and I Streets. Jim is secretary of the Society, and we'll bet that he'll inject his usual pep into it. Jim's address, by the way, is 411 Eighteenth Street, N. W. Jim says, "It's a treat to read your stuff in the REVIEW." Thank you, Jim, for them kind words.

Referring again to the *Boston Transcript*, we have quite an extensive clipping, headed, "Builds House of Granite—Greater Boston Architect Describes Dwelling Built at Watertown—Low Cost—Weatherproof and Fireproof." The architect to whom it refers is none other than H. Whittemore Brown, IV. We suspect that the title should read, "Builds House of *Gunite*," as Brown's idea is based on shooting the walls with a cement gun—the framing of the house being formed by concrete beams cast between light wood forms, the latter remaining in place to serve as nailing strips. Brown described his idea in a paper read before the convention of the American Concrete Institute in Cleveland. We believe that the future house will be built of concrete, and Brown's research leads to an important advancement in this direction.

As we said at the beginning of the letter, the Class secretary, more popularly known as "Frank," found time in Buffalo to write about twenty men in the Class, asking them to send the news for this letter. The results were very gratifying and we are glad to see the men responding so well and Frank preparing to take up the burden next month. The first one is from A. H. Clark, I, who is now living at 134 South 35th Street, Omaha, Neb. He writes as follows:

"I got your note, very formally addressed, and am glad to comply with your request.

I think this has been published: In October I moved my family from St. Louis and have a job as superintendent of the Bemis Bros. Bag Co. factory here. That is about all I could say for publication. Privately, to you, I can add that I am thoroughly enjoying life and scan each issue of the REVIEW for news of Tech classmates. It would be interesting to know what proportion of our classmates are in business as distinguished from professional engineering. My experience has been part of both, but most of the former.

Chuck Loomis, '16, and his wife helped us pass many pleasant evenings while in St. Louis. Sincerely yours."

John N. Dalton, X, sends the following from Providence, R. I.:

"I received your communication yesterday morning and it served to remind me that I should do my part to at least try to keep the Class spirit alive. I feel guilty in not having sent in a contribution to the Class column in the REVIEW before this time, putting it off time and again for no good reason. However, I can readily see that if every one acted in this manner, the Class spirit would soon die an unnatural death. Furthermore, I must admit that the first thing I look at in the REVIEW is the Class news, and I read with great interest what the other fellows are doing. So herewith I will try to fill up some valuable space with an account of myself.

To begin with, I must mention a subject which seems to occupy a large space in the Class dispatches of late. I am still in the state of single 'blessedness;' this particular fact

will probably be considered by some as the most important 'event' so far in my career, or should I say the most important information that I could give about myself? I feel quite certain that G. Rooney and L. Quirk will take the latter viewpoint. I will not commit myself to state at the present writing whether I am satisfied or not, yet I will add that I do some serious thinking when the income tax falls due. If all reports are correct, probably I am in the same class with you, Frank. You can draw your own conclusions from this ambiguous statement.

At the present time, I am located with the Atlantic Mills here in Providence, in charge of the chemical work that is necessary to keep the place going, and dispensing whatever chemical advice the powers that be will listen to. I am accumulating a great deal of experience and information in the mass of detail necessary for the application of dyestuffs to fabrics.

Providence, as you may know, is quite an attractive city with its interesting colonial traditions and its excellent location in respect to summer vacationizing places. We have quite an active Tech club here and have a good time about once every month. Dr. Talbot spoke at our opening dinner and he gave a very interesting account of undergraduate activities and his experience since assuming the office of dean. I see L. Fletcher and Lucius Bigelow, both members of 1915, quite often. Lucius, who is now a member of the Brown Faculty, is almost one of my neighbors and we get together very frequently.

Well, I must close this note and extend to yourself and the rest of 1915 the best of wishes."

We hope that you will all read that first paragraph again and apply it to yourself. Every one says that they are reading the Class news with interest, but they are very backward in coming forward with news.

From Syracuse, N. Y., 1024 Euclid Avenue, came the following:

"My last jump brought me to Syracuse, where I am working as resident engineer for Monks & Johnson, on construction of a new manufacturing plant for the Lamson Company. I have another addition to the list of 1915 children to report. Mildred Anne Bond, born at Syracuse, January 10, 1922. Would be glad to see you if you get down this way. My house telephone number is in the book. Lamson Company's job is out in Eastwood, telephone James 5138. *Arthur H. Bond.*"

Our old friend, Ned Stelle, I, who is still in Minnesota, sends the following very interesting letter:

"Your letter requesting dope on 'yours truly' just received. Am glad you wrote it for I have been threatening to write for some time but just couldn't seem to get at it. I always turn to the Class news first, to see what the gang is doing, and I shall look forward to the next REVIEW hoping that your letter drew out some others as it has me.

The above department (Minnesota Highway Department) has seen fit to hold me during these hard times, for which I am certainly grateful. In fact, hard times have not seriously handicapped highway work in Minnesota. A constitutional amendment was adopted at the last session of the legislature, creating a seven thousand mile trunk highway system, entirely under State control, with a two per cent auto tax combined with Federal Aid to finance it. I was fortunate enough to be appointed engineer of plans in charge of the design of new construction. We have about thirty-five men in our department and they certainly are a regular outfit. I couldn't ask for more. We have just moved into a new concrete building designed for our needs, so you can see that everything is rosy. I certainly am strong for Minnesota; the reason is evident.

My little family, wife and daughter, no increase since last report, are doing fine. Give my best regards to all hands, and should any be passing this way I hope they will look me up."

Allen Abrams, V, writes as follows on the paper of the "Cornell Wood Products Company, Cornell, Wis.":

"Your reminder was a timely one and spelled a knock-out for old Father Procrastination. I am probably like three-fourths of the Class, mighty glad to read all about what the others are doing but too lazy to write a letter now and then.

Of course, on the other hand, I can't give you a whole lot of news because we are far enough from civilization that a Tech man is rare indeed. However, we enjoyed a day's visit from Ken King recently; selling dyes for du Pont certainly agrees with him, for he is looking well and seems to be perfectly satisfied with Chicago life. Spitz, of the 1914 Class, has been up several times in connection with tests which the Newport Company is making

here. Since you will be wondering just where we are located, it will be necessary for you to look up a map of Wisconsin and find Eau Claire, then figure about thirty-five miles from there to the north. Cornell is on the banks of the Chippewa River and right in the midst of real fishing and hunting; when the fever seizes you, come up and we will show you how it is done.

This has been real winter, as we have had snow for four months, with a total fall of probably ten feet or more. Last week I had to go down to Madison, and when I got back to Eau Claire found that the blizzard had tied everything up completely. Fortunately I found a man who was going to Cornell by sled, so we drove it from Chippewa Falls, a distance of twenty-five miles and with the thermometer playing around zero. It happened that no train came through for four days, so I played in luck. The storm was so bad in places that miles of poles and wire were broken down by the ice and a foot of ice had to be dug from the railroad tracks. Aside from this and the fact that we have had the temperature as low as 46° below, we have nothing to complain about, as it has been ideal winter weather.

As you can imagine, we both get pretty well saturated with small town life and look forward to an occasional visit to the city. However, with the spring coming on, we are moving into our new house and there will be plenty of gardening and similar domestic pursuits to take up the time.

P.S. How goes Houdaille, Frank, and do you make 'em for Fords?"

He followed it up with this note three days later:

"In sending you the notes, the other day, I forgot a couple of items which may be of interest. I will add them here.

About the middle of January I spent a day in Madison with Dr. Walker, formerly in charge of chemical engineering at the Institute; then Mrs. Walker and he visited us for a day at Cornell. Dr. Walker seemed to be in the best of health at the time but was working hard; shortly after they returned to Chicago Mrs. Walker wrote that he had been seriously ill with flu, but they have since gone to California where he is spending a few months in getting thoroughly rested.

Heard recently from Frank Hall, who is holding a responsible position with the Texas Company in Port Arthur. The idea of their being able to go around in shirt sleeves is kind of exasperating to a fellow who is sewed in for the winter."

Joe Livermore, another faithful of Course I, pens the following at the Hotel Carlton, Milwaukee, Wis.:

"Your letter of the third has just reached me, being forwarded from home. You are right in saying that the boys like to read in the REVIEW what the classmates are doing but they find it difficult to sit down themselves and help out the Class secretary. I am afraid I belong among those who had rather read.

About a month ago I was transferred from our Boston office to the Chicago office and sent up here to Milwaukee to take charge of the erection of an eight-story reinforced-concrete building for the Phoenix Knitting Works. If you don't happen to remember what they make just ask the ladies. Their specialty is knitted hosiery, scarfs and underwear. The new building will house the finishing processes after the knitting, from drying down to storage and shipping.

At present we are driving foundation piles, some two thousand of them being required. Among other numerous duties I have been wading around the muck in hip boots, staking out and inspecting piles.

Next week Mrs. Livermore and our son Dick (M. I. T. 1942) will join me here and we expect to make our home here for the present at least.

I hope these notes may reach you in time to be of use in the next issue of the REVIEW. My best wishes to you, Frank, and any of the boys you may meet."

Raymond B. Stringfield, X, who can always be relied upon to come across, added his bit as follows, from Akron, Ohio:

"You know Doc Lewis bawled me out in class once to the general effect that 'Stringfield can talk without effort for at least half an hour without saying anything on the subject,' so if you develop serious symptoms of being gassed, remember you brought it on yourself.

This finds us residents of the Rubber City for about the last two months, Goodyear having decided that in connection with the general shake-up the climate of Akron would be good for several of us from the California plant, Darroe, '11, who was manager technical division in California, coming as development manager; Dinsmore, '14, coming

as chief compounder, and 'yours truly' as chemical engineer on rubber board development. Our wives held several indignation meetings, but finally decided they would come along. Letters from Los Angeles say that it has rained six days out of the week ever since we left, so I prefer the climate here, and my wife who has never seen any appreciable amount of snow before, thinks it is wonderful. She'll get over it.

This place is full of Tech men, mostly from other classes, but Herman Morse, II, '15, is manager mechanical engineer in that division. Their hangout is separated from my hole-in-the-wall by only some two hundred feet of mud and H₂S fumes, so we see each other occasionally.

Letter from Casselman in Pittsburgh says he's teaching a Sunday-school class and singing in the choir. Doesn't sound quite natural, and as he's still unmarried we suspect ulterior motives.

If I write any more, I'll degenerate into straight bull, so will stop. Don't think that you have to publish all this. Regards to any of the fellows."

Albert U. Walter, II, sent in this short note on the letterhead of the "Walter Manufacturing Company, 1010 Keyser Building, Baltimore, Md.," of which company he is now the proprietor:

"Not knowing whether the information asked for in your letter of March 3 should be sent direct to Boston, I am writing to you.

Last September I organized the above-named company to manufacture a spring lubricating cover made of metal. The manufacturing end is now straightened out and we are now getting ready to push the selling end of the proposition.

The Houdaille recoil check certainly is a cleverly designed device. Is it possible to make it cheaper so that it would be within reach of the low-priced car owners?

I wonder if you ever get to Baltimore? If you should, be sure to look me up."

I wish Frank would take this question of Houdaille shock absorbers for Fords up seriously. This makes three of us in one month who have asked for them.

The last letter came in this morning's mail from the General Radio Company, Cambridge, Mass., signed by another reliable, Horatio W. Lamson, VIII:

"Say, old Top, is this an 'off' year on activities for '15, or is the season just natcherly too dry for raising the proper spirits. I haven't heard a ripple all winter. Unfortunately, I was in Washington at the time of the annual Alumni feed in January, so missed whatever refreshments might have been available there.

However, I have not been pining of idleness lately, as Sibyl Halcyone Lamson arrived on the afternoon of January 30, and life has been a merry dance since then. I am still making hydrophone equipment for the Navy, although last fall I left my quarters at Harvard to take the position of hydrophone engineer with this company.

Would be pleased to have a visit from yourself or any of the boys when you are in this locality. Yours for better days."

We have tried hard to raise the proper spirits, but we haven't been able to get the correct recipe, and besides, the cork flew out of the bottle and it wasted itself all over the cellar floor. Seriously, the interest in the Class luncheons in Boston fell away so toward the end of last year that at the last luncheon there were only two men present. As it takes a lot of time to call up the men and make the necessary reservations and then have about a third of them show up, it seemed as if the best thing to do was to discontinue them. Waldo Pike, I, and yours truly spent considerable time in trying to get the men interested but it appeared to be a hopeless and thankless task. However, if a sufficient number would show an interest we should be only too glad to start them again.

We almost forgot to mention a small-sized reunion of part of "Murderers' Row" which was held at the "Master Builders" one Saturday noon. It was very informal, being arranged at 11.30, due to the presence in Boston of several of our distinguished classmates. The reunion was under the auspices of Henry Sheils and George T. Rooney, the others present being Charles Lester Morse, the happy bridegroom, and Lawrence F. Quirk, the aforementioned proud father of William. Les was just going through Boston and Larry was here for the day, and a very enjoyable hour was spent in reminiscing."

Well, the clock goes on and the mail closes in ten minutes (we have regular mails out here), so we'll cut this short and fold it up and put it in an envelope and lug it over to the post office and drop it in the box and heave a sigh of relief that there is nothing to worry about until June 15.

Before we say 'good night' we would call your attention to the fact that we have

risen up in the world, having moved from 34 to 100 Floral Street, Newton Highlands 61 Mass. Kindly send all checks, contributions, and old clothes to our new address."

1916

CHARLES W. LAWRENCE, *Secretary*, 315 Glenwood Avenue, Pawtucket, R. I.

E. H. CLARKSON, JR., *Assistant Secretary*, 315 Court Street, Clarksdale, Miss.

One of the most interesting achievements by members of Sixteen in many months is the following made by Frederick W. McKown, VI, now an acoustic expert in the development and research department of the American Telephone and Telegraph Co., in his highly successful work of telephoning every word and every musical note of the Armistice Day services at the Arlington National Cemetery to audiences from New York to San Francisco. His description of the feat, whose successful outcome was doubted by some of the country's greatest telephone experts, is modest in the extreme. It shows the work was started on September 21, at a time when McKown was testing amplifiers in a park in Newark, New Jersey. The first group of engineers arrived with McKown in Washington on October 2 to direct the wiring and placing of the large horns. In placing the horns in the amphitheater, the task was made doubly hard by the necessity of avoiding interference between the horns announcing to the outside with those announcing to the inside audiences, and so causing disagreeable noises. Even more difficult was the problem of getting the long lines for the transmission to New York and San Francisco. When forty horns instead of the eleven first planned for had been installed, his control room was located in a large crypt in the cemetery and the big operating machine set up, while McKown as chief observer occupied an unfinished burial vault. On the final day of the tests, five observers stationed about the amphitheater and the adjacent grounds reported bad echoes to McKown, who had final changes to make. Even after these tests engineers were doubtful of the results to be obtained when the amphitheater was filled with people, and especially over the long-distance transmission of the service. This doubt was dispelled after the first few words of the service were spoken and the audience in Madison Square Garden heard as perfectly as the people at Arlington and the speakers themselves. "Simply superb" was the message wired to Mr. McKown by an official of the company who was in the New York audience. This is the first acoustic operation of such magnitude attempted in the world, and will open the way to greater development along this line, says McKown.

Dr. Murray P. Horwood, VII, recently did some consulting work for the town of Winchester in connection with the pollution of the Aberjona river which flows through it, and in this connection recently delivered an illustrated lecture in the town hall showing by pictures the pollution in the river from chemical discharges and waste matter from tanneries and other factories, from sewage and other sources. He showed how the construction of two new main sewers would eliminate this waste in about a year's time from the completion of the sewers. A bill is now before the state legislature to appropriate \$350,000 for the construction of these sewers as part of the big metropolitan system of the State of Massachusetts.

Maynard C. Guss writes from Shanghai, China: "I came to China with the Standard Oil soon after leaving Tech, and have been here ever since, but expect to return to Boston next summer. I am in the Construction Department for the Socony outfit. Married a Boston girl, and have a growing family. My Tech spirit is kept alive by regular monthly attendance at the Shanghai Tech Club meetings, composed equally of Chinese and Americans, of which Eckdahl and Lam, '16, are members. Said club is trying to start a Tech school in China. Yours in '16."— Say, that is great to get a good word like that from the other side of the world. How about some of our other globe-trotters, as Rafael, Alfaro, Bill Bowditch, or Carstens, Kem Dean or Jack Freeman? Let's hear from you too.

Word comes from the rubber city of Akron, Ohio, that Flip Fleming has again received a promotion, this time to general foreman of plant 1 of the Goodyear Tire and Rubber Co., where he has been for the past five and a half years. His former job was to have charge of the production of the small tires of Goodyear's plant 2, and it is characteristic of him that he was instrumental in more than doubling the output of that plant in the first few months that he had charge of the work.

The engagement of Miss Florence Sprague Gifford, daughter of Hon. and Mrs. Charles

L. Gifford, of Cotuit, to Howard P. Claussen, of Boston, is announced. Miss Gifford attended the Girls' Latin School, Mount Ida, and Wheaton College.

Mr. Claussen is the son of Mr. and Mrs. E. E. Claussen, Huntington Street, Hartford, Conn. He is a graduate of the Massachusetts Institute of Technology, class of 1916, and a member of Phi Gamma Delta fraternity and is president of the Boston Graduate Chapter. During the war, Mr. Claussen served as lieutenant of the Naval Flying Corps. In 1917 he was on the staff of the commander of the United States Naval Aviation Forces in Europe and later served on the staff of Admiral Sims. Mr. Claussen is a member of the Belmont Springs Country Club and the Engineers Club. No date has been set for the wedding.

Eddie Clarkson writes from the cotton fields of Mississippi:

"I was interested to see the November number of the REVIEW, and note that you announced that I would regale the brethren with an account of various things in connection with my new occupation. In this connection let me say: (1) that you never can tell what a nigger is going to do next, and (2) that the worse you treat them, the better they like you. That is about all that I can give you in regard to explicit facts of my learning. In general I would say that a winter in Mississippi tends to acquaint one intimately with buckshot mud, in contrast with the snow, sleet, and various freezings and thawings of Boston's best. There seems to be more mud in Mississippi than there is snow in Boston, however.

I have just received a letter from Gordon Fair, who has recently returned from Geneva, Switzerland, where he was Assistant Chief of the Division of Sanitation of the League of Red Cross Societies. He had been over there for just about a year. According to his plans, as per his letter, he expects to be in this country for the present, at least.

I wrote to Obie Pyle, Rusty White, Chuck Loomis, and Bill Farthing, asking each of them to forward evidence of their activities, but as yet have had nothing but Christmas cards in return. If you will make out a list of those to whom you have written, I will see if I can get some information from some of the others.

I note that 1917 seems to be somewhat disturbed (?) by our activities of the last few months. At least, they are giving us a lot of space in their section of the Review. Their 'Home Office,' even with its advantage of location, can well afford to take lessons from 1916.

M. A. Monroe has moved to 208 West Fordham Road, New York City. He is still with the Pittsburgh Des Moines Steel Co., with business office at 50 Church Street, New York City. In his last letter he writes that it is hard for him to realize that he has been out five years, and that he has been five years with this concern. He emphasizes the fact that he is not in the marriage market. Take that statement for what it is worth. None of these fellows say anything about marriage until after the act has been accomplished."

What is Dan Comiskey's address? Don't know, Eddie.

Chuck Loomis writes to Eddie Clarkson as follows:

"By this time the REVIEW for which you wanted news has probably gone to press, but there will be another in due course of time, and perhaps I can help out a little on that, although my contact with '16-ers is rather limited.

So far as I know, there are only three of the elite '16-ers in the city (St. Louis). Vertrees Young, who is with Robert Gaylord, Inc., paper boxes, turns out at the Tech lunches occasionally. He and I belong to the same Legion post; in fact, he saved my good name by joining it in the 'Every member get a member' campaign. Being in a strange city, I had almost despaired of finding any one to make up my quota of one, when he turned up at a mid-summer Tech luncheon. The other '16-er here is Joel Connelly, now a lieutenant in the public health service. At last accounts he was busy lobbying in the State Legislature, trying to put through some public health laws. Some of them, at least, passed, so I assume he is a successful politician, as well as a sanitary engineer. We haven't been able to get him out for the Tech lunches, although we send him a beautiful post card every month. I speak with feeling about the post card, for the Tech delegation with the Bemis Co., St. Louis, five in number, finance the luncheon notices, and we like to get results with our money.

The luncheons mentioned above are held the first week of each month at the Planters Hotel. We started them last summer, and didn't meet with any howling success to begin with, but they are gradually growing, both in numbers and good-fellowship as the bunch get acquainted. Come to think of it, I took you to one last fall, so why all the discourse.

Oh, I almost forgot my tack. To the best of my knowledge and belief, I am not on the 1916 mailing list; at least, I didn't get any of the reunion notices, except the first one,

that said something about \$2.00. I believe I remitted. Apparently, as soon as you send in your money, you are no longer a good prospect. Seriously, after all that drool the 1917 crowd sprang on me, I would like to get back on the 1916 mailing list. (We check this idea; the phrase '1917 drool' is a good one.) Will you tell Charlie to see to it?

My own efforts have been diverted from the so-called engineering that I was doing, to the sale of bags. Among our other types of bags is a most excellent line of coin bags, and when any of our classmates get so much money that banks won't take care of it, I'll be glad to sell them a few thousand of these useful little money bags in which to store it. I'm enjoying the new experience; so far it has been entirely a mail campaign.

The pictures you mentioned, you will find enclosed — not. I haven't exposed myself to a camera since Herr Bachrach did the job that appeared in the 1917 *Technique*. I have an eleven-months-old boy, who is probably the best looking baby in the Class, but he too objects to publicity; besides, I don't want to make all of the other fathers jealous.

So much for news. If you can cull any news out of it, you are welcome. If you make enough of the long green growing white cotton, come up to St. Louis and I'll help you spend it. In any event, if you start north, plan to come through here and drop off. My best to all the gang in Boston when you write.

Please tell Charlie, or whoever else wrote up the 1916 reunion, that it sure sounded good, and made me more sorry than ever that I couldn't be there. 1925 will find me among those present, if I have to walk. Sincerely (signed), 'Chuck' Loomis."

"Chuck" certainly responded nobly to my call for news, but I wish that he would send us his picture, and also that of the beautiful baby. Probably the truth of the matter is that the baby is so much better looking than his Dad that Chuck doesn't want to let the rest of us see the evidence in a picture.

I am still waiting for news from other members of the Class, and am in hopes that there will be some before long.

ADDRESS CHANGES

Eugene J. Barney, 21 Seminary Avenue, Dayton, Ohio; E. Hale Clarkson, Jr., 315 Court Street, Clarksdale, Miss.; Kemerton Dean, Sanders & Company, Houston, Texas; Capt. Albert C. Lieber, Jr., Camp A. A. Humphreys, Va.; Philip C. Baker, 1166 Edison Avenue, Detroit, Mich.; Carleton W. Lovell, Post Office Box 31, Dennis, Mass.; James N. W. McClure, First National Bank, Paris, Ky.

1917

HOME OFFICE, Room 3-208, M. I. T., Cambridge, Mass.

Since the last issue of the REVIEW we have been in receipt of a number of communications from various sources which have given us considerable information concerning the doings of the various members of the Class. We regret to state, however, that we have had no reactions from the Class of 1916 on account of the slurs which we inserted about them.

A meeting of all members of the Class in the vicinity of Boston is to be held in Walker Memorial at 6.30 P.M., Tuesday, April 25, 1922, for the purpose of electing a committee to manage the Fifth-Year Reunion which is due to be held this June. As discussed before in these columns the idea has been proposed of holding the reunion in September instead of June and it was asked that any interested parties write the Home Office expressing an opinion. Outside of about three letters no expressions have been received, and the proposition will also be brought up at the time of this dinner as to whether it would be a good idea to hold a reunion in two sections: the first in June and the second in September. This ought to please both parties and would enable us to find a hotel large enough to accommodate the crowd which is almost sure to appear at the last minute without having given previous warning to those in charge. To announce any proposed plans at the present would be unseemly and might embarrass the committee which is to be elected. However, the Home Office has been on the job to the extent of obtaining some ideas on hotel prices and we rather guess that the Mayflower Inn at Plymouth is entitled to favorable consideration, particularly in view of the strong recommendation given them by the Class of 1911 which held its ten-year reunion there last year. Due notice of this meeting will of course be sent to all whose addresses are on file, but should you not receive a notice through our oversight we ask that after reading this announcement you let the Home Office know

that you are coming. Furthermore, although the statement has been made that this meeting will consist of the members of the Class who are in the vicinity of Boston, it goes without saying that if any one cares to come on from the Pacific Coast or other far-distant points we should be glad to welcome them, and in fact as an inducement to come the Home Office hereby offers to set up a free dinner to any member of the Class who travels at least a thousand miles for the purpose of being on hand.

Walt Beadle, I, has been in the Traffic Department of the Philadelphia Rapid Transit Company as assistant traffic engineer in charge of the department, as we happened to hear from him recently. Speaking of the street railway business a representative of the Home Office paid several calls in the Middle West recently; among them one upon Phil Cristal, I, secretary to the president of the Cleveland Railway Company. Shortly after his return to Boston the office received the announcement of Phil's marriage to Miss Romola Johnson, Wellesley, 1917, which took place in Cleveland on March 4. Several other 1917 men were also in Cleveland, but our representative's stay was so short that it was impossible for him to see more than Phil and Mrs. Phil, and do the few errands which justified the expense account for his trip.

A recent list of the members of the Technology Club of Northern Ohio shows that N. C. Works, III, is to be found at Glendale, Hamilton County, Ohio, and that our old friend G. D. Goepfert, IV, who will be distinctly remembered by those who were inflicted by the course in architecture, is located at this address: 1940 East 73d Street, Cleveland, Ohio. Incidentally Phil has the major portion of the seventh floor of the Hanna Building partitioned off as his private office.

On that same trip our representative visited Detroit and spent an evening trying to reach Milt Pettibone, IV, and H. J. Quilhot, II, on the telephone without success, and being forced to leave early he missed the pleasure of catching them the next morning. They are with the Detroit Edison and Milt is listed at the Fort Shelby Hotel as a practising architect. This section of the Middle West around Lake Erie seems to be a prominent foot-hold of the Class of 1917, inasmuch as we have just been favored with the prospectus of the Brock Auto Financing Company of which Mal Brock is president and secretary. This organization is located at Akron and is offering eight per cent preferred cumulative stock at one hundred dollars per share, carrying five shares of common stock as a bonus. Any one interested may address the Brock Auto Financing Co., 512 Metropolitan Building, Akron, Ohio. Securities are exempt from Ohio State Tax and normal Federal Income Taxes.—adv.

Bob Gay is likewise still in the automobile business being the "R. N. Gay Battery Co.," Waco, Texas.

We include the following concerning Sherry O'Brien taken from the *Morning Telegraph*, February 11: "Frances Haskell Niblack, daughter of Governor and Mrs. Charles Nathaniel Haskell, will be married at ten o'clock this morning at the home of her parents, 525 Park Avenue, to Lieut. J. Sherry O'Brien of Boston. Following the marriage ceremony there will be a wedding breakfast at the Waldorf-Astoria. The bride, who received her early schooling at the Ward Belmont Seminary at Nashville, Tenn., and at Monticello, Ill., made quite a reputation for herself by her activities as a nurse in the world's war. At the beginning of hostilities she took a course in training and became a graduate Red Cross nurse. After receiving her diploma she served three months at the Post-Graduate Hospital in this city, after which she departed with other Red Cross nurses and saw active service in the front ranks in France for a year. She was a favorite with the soldiers, who nicknamed her 'Smiles,' the only way she was addressed by the army men. Since returning to New York City the bride has been one of the active members of the Red Cross volunteers, spending one and two days weekly at the different local hospitals where wounded soldiers are housed. The bridegroom, Lieut. J. Sherry O'Brien, is a graduate of the Massachusetts School of Technology at Boston and during the war was connected with the American flying service in France. Lieutenant O'Brien was pilot of a squadron.

Governor Charles Nathaniel Haskell, father of the bride, was the first Chief Executive in the State of Oklahoma and is familiarly referred to by the citizens there as the 'Father of his State.'

After the wedding breakfast the pair will leave for Miami, Florida, where they will spend their honeymoon. They will make their residence in this city upon their return."

Another member of the Class who is interested in oil is Dick Lyons, III, who since his return from Venezuela has been occupying the position of petroleum geologist in examining oil land for the Sinclair Oil and Gas Company with headquarters at Tulsa

Oklahoma. Dick Whitney is in the same section of the country, being at present as we mentioned in our previous issue, district manager of the Tulsa office of the American Appraisal Company. He was previously oil scout for the State of Kansas for the Sinclair Oil and Gas Co. until his present potent and presumably profitable affluence was attained.

J. M. Batschy is in the same section, being chief draftsman of Smith & Senter (not Ras who is still in Texas) architects of Okmulgee, Oklahoma; and, speaking of oil scouting, Arthur R. Knight, who was formerly in the development department of the Standard Oil Company of New Jersey, on field experiment work to increase oil and natural gas production, is at present in charge of the development work in the West for the Commercial Solvents Corp.

News has just arrived that I. B. Crosby, XII, has been making geological examinations of the foundations of the Hales Bar Dam for the Chattanooga and Tennessee River Power Company and of the Mitchell Dam for the Alabama Power Company. We expect to hear the announcement that these dams are fundamentally wrong in construction. Speaking of dam construction, etc., Tommy Meloy, XV, gives us as his temporary address, 16 Kuan Tou Fu Fang Hutung, Nan-Chih-Tze, Peking, China, where he is assistant to Dr. J. A. L. Waddell of the Yellow River Bridge Commission.

As usual we find that a goodly portion of the members of the Class are interesting themselves in aviation. Besides E. P. Warner who is a member of the Institute Faculty and who has been building a couple of new wind tunnels out back of the Dome, we are also represented by Lieut. Eddie Rounds, II, who is still a full flight tester for the Bureau of Construction and Repair of the Navy Department in Washington, and also William G. Brown, who is stationed at Langley Field working directly under the chief physicist. As mentioned in one of our previous issues Ray Brooks, XIV, is a student in the Field Officers School at Langley Field. Rumor hath it that for some time Captain Roberts (C. H. M.) has been doing some flying around in connection with the work of the Ordnance Department and strange to say the Home Office has recently had a communication from the ex-general-manager of Tech Show whom we expected to see in Boston recently, but who wrote, "Unfortunately Uncle Sam controls the biggest part of my time and, unless I have to be at Watertown Arsenal about that time, I won't be able to get away."

To get back on the subject of aviation, Ken Lane has been an aeronautical engineer with the Dayton Wright Co. in Dayton for some time and has charge of the design from the standpoint of structural strength of their products, which are made for army, navy, and commercial purposes. E. E. Aldrin is also in Dayton, being attached to McCook Field. He has recently returned from a European tour on which he visited England, France, Belgium, Holland, Switzerland, and Italy in the interests of the Air Service.

Also last week we had the opportunity of talking with a former officer of the Air Service, L. L. McGrady, XV, who on a recent trip to Philadelphia spent a strenuous evening with Dud Bell, XV. Details are lacking, but Mac seems to be none the worse. He also saw Dutch du Pont, IX, in Wilmington.

Johnny Holton is still with the firm of Lewis, Green, McAdams and Knowland; Ken Bell is still with the Lewis Recovery Corporation, and Ray Stevens is likewise in the chemical field in the vicinity of the Institute, being assistant to the president of Arthur D. Little, Inc. Johnny's work recently has covered a rather narrow and selected series of correlated topics, such as investigation of the paper and textile products and the macaroni business. Barney Dodge is pushing out chemical lectures at Harvard.

A number of members of the Class have been doing some important construction work recently. Guy A. Gray has been in charge of the construction of the switchboard at the New Queenston power house of the Hydro-Electric Power Commission of Ontario; while Tommy Ryan has been assistant superintendent of construction for Thompson-Starrett Company on the Hotel Ambassador, New York City and the Sterling Laboratory at Yale University. William E. Thrasher is with Gladding & Morrison of Wilson, N. C., on small concrete hydro-electric development work.

Louis Ferguson is also with Thompson Starrett and is in charge of mechanical construction of the Providence-Biltmore Hotel. E. M. Woodward, IV, is superintendent for Franz C. Warner, architect in Cleveland.

Freddie Stearns announces the arrival of Frederick Pickett Stearns on March 11, 1922, weight 6½ pounds.

Not much has been heard of Ham Wood since his encounter several years ago with the Endowment Fund Committee, during the course of which encounter Ham expressed

a desire which if carried out would have led to the physical discomfort of the members of the committee. We take pleasure in printing therefore the following clipping from the *Boston Post* of March 12:

"Mr. and Mrs. Edmund Billings of 80 The Fenway, Boston, announce the engagement of their daughter, Katherine, to Mr. Hamilton Lansdowne Wood, the son of Mr. and Mrs. Frank L. Wood of Chicago. Miss Billings attended the May School and is a member of the 1917-18 Sewing Circle and of the Junior League. She is a student of Radcliffe College. Mr. Wood was of the Class of 1917 of the Massachusetts Institute of Technology. He is at present located in Syracuse, N. Y., as the special agent of the Great American Insurance Company of New York."

Doubtless many of the members of the Class will remember discussions in these notes about one year ago concerning the appeal made to the Class together with others by the Advisory Council on Athletics. You will also recall that the Class of 1917 was the first to respond to their appeal which was namely that each alumni class subscribe fifty dollars per annum to be used in general furtherance of athletics at Technology. Recently a committee of the Institute Committee submitted a lengthy report to the Corporation asking for a revision of the apportionment of the student tax together with an increase, the major portion of which they wished to devote toward the support of athletics which receives but \$2.50 per year per student at present. The difference between athletics at the time this Class was in the Institute and now may be briefly expressed by the statement that whereas we then operated eight or nine teams we are now operating close on to thirty, and their total budget is much less than many large colleges spend upon a freshman crew, so that one can see that the finances are being efficiently administered. It is proposed to use the money contributed by the alumni to tide over the situation until the Corporation sees fit to increase the student tax and then to use it for extra purposes as the provision of record cups, etc. Last year the Class raised the money by appealing only to those of its members who had actively taken part in athletics as undergraduates, asking that each man send one or two dollars. There were about eighty such men and some sixty dollars was raised very quickly. It has been decided this year to issue a general appeal and hence we ask that each man who feels so inclined send a check for a dollar or two, made payable to "Allen W. Rowe, Treasurer." Just address your letter to "1917 Home Office, Room 3-208, M. I. T., Cambridge 39, Mass.," and we will see that it is forwarded to Dr. Rowe. In case more than the desired fifty dollars is obtained the extra money will be sent to Dr. Rowe and applied to the credit of the Class so that we will not have to bother you next year.

News was recently received from E. L. Kaula, '16, about some happenings in Australia where he is located with the Texas Company, and inasmuch as his letter contains certain extracts relative to 1917 men we include a portion of it. "Don Swain is still here (New South Wales) in the same house with me, and Bill Hunter is also about off and on. It will probably be March before he sails for the States again. Early in November I had to go down to Adelaide to organize a branch for South Australia. Heretofore we had been represented in that state by agents. The job took me until after Christmas [his letter was written in January], and my only observance of the day was a stupendous dinner in company with our new manager. It was broiling hot, so that we were almost stupefied by the time the meal was finished. Things generally seem a bit brighter now although American goods are not coming in very fast. Prices are getting back to normal gradually. We are now selling gasoline at twenty-six shillings a case or about fifty-six cents an American gallon at present exchange."

Jimmie Wallis, who has been scouting the Middle West to find prospective customers for the Sullivan Machinery Company has been appointed assistant Asiatic manager for that company. His chief is Nat Brodie, '02. Jimmie sails on May 18, on the *Empress of Russia* of the C. P. O. S. from Vancouver, and will make his headquarters in Tokio. His territory stretches from India to the North Pole, and from European Russia to Shantung and Japan. His address will be care of Sullivan Machinery Co., Foreign Department, People's Gas Bld'g, Chicago, Ill.

At last we have had some real information contributed by an honorable member of the Class for use in the Class notes. This is the sort of copy which we should like to see more of. Due to the fact that Bill Eddy's name is not mentioned on this prominent Phi Gam roster, it of course is fair to assume that he sent in this clipping from one of their recent news letters.

Walt Harrington, '17, writes from Los Angeles and Pasadena that he's just opened another branch store—this time in Detroit, Mich.—and has remodeled the Los Angeles outfit. Old Walt is doing lots of business.

Frankie Butts Butterworth, '17, Marion Shoe Company, Marion, Ind., reports the arrival of a daughter, Mary Rebecca Butterworth, on September 17. Ole Frankie and family are planning a big trip to Boston next spring—to attend the 1917 Five-Year Reunion.

Rusty Robbie Robinson, '17, reports over the long-distance wire from Ashtabula the progress of the oldest son of 1917. His boy can lick all the other kids of the delegation—why? 'Cause he's fourteen months old. But wait till we get going. (Chorus of all others.) Rusty is a prosperous red-headed merchant, dealing in building materials in partnership with his father. It is rumored that he left New York when the investigation started and moved to Uhiuh. Ole Rusty and family are planning a big trip to Boston next spring to attend the 1917 Five-Year Reunion.

Dutch Harold Carl Neuman, '17, Des Moines, Iowa, reports the arrival of a son, Richard Gordon, last spring. Otherwise, old Dutch hasn't said a word since the Germans were driven out of France. Snap to, Dutch. Tell your secretary to write us a letter with pertinent information *re* all hands. After congregating at some local point all members of the '17 delegation are going to descend on Des Moines and make Dutch, Janet and the boy come back to Boston for the 1917 Five-Year Reunion.

Brick Atwood Peenuckle Dunham, '17, who is said to be the only bachelor in the Class, is now working full time at the Walter Baker's Chocolate Factory in Milton, Mass. Brick, your chances are getting fewer. Better come to the 1917 Five-Year Reunion.

Stan Dunning, '17, reports from 10 Remington Street, Cambridge, that business in the tin knocking line is good. Stan, his father, *et al.*, make ash cans, cake tins, garbage cans, egg beaters and such things. Stan and Amy will be here next spring for the 1917 Five-Year Reunion.

Dad Wenzel, '17, is still with Jackson & Moreland in town, but at present is working in New York; temporary address, 13 Gramercy Park. Since Dad joined the navy we can no longer vouch for his habits. At any rate, he is the only one in the delegation who is known to have spent any time in Canada in the recent years. The only redeeming feature in his case is that he did take his wife with him. Dad and Zilla are coming to Boston for the 1917 Five-Year Reunion.

Jack Coffin, '17, at one time of Harvard, is in New York with Jackson & Moreland, on the same job with A. H. W. Unconfirmed rumors state that Jack got a haircut, recently. When he comes back for the Harvard commencement we'll sidetrack him to the 1917 Five-Year Reunion.

Dick Fat Whitney, '17, reports nothing. But our agents are on his trail. Last reports state that when the oil business took a slump Fat took over the American Appraisal Company. We have been unable to get this rumor confirmed, but we do know that his address is now Tulsa, Okla., care of the Chief of Police. Fat and Ruth and Barbara—aged three years and two months—are planning a big trip to Boston next spring to attend the 1917 Five-Year Reunion.

CHANGE OF ADDRESS

The following address changes have been reported: Carleton C. Adams, 5330 Walnut Street Philadelphia, Penn.; George A. Andrews, 5428 Bartmer Avenue, St. Louis, Mo.; Joseph H. Axtmayer, Gov. Post St. No. 25, Mayaguez, P. R.; Lieut. Edwin R. Barry, Springfield Armory, Springfield, Mass.; John M. Batschy, 1055 East Eighth Street, Okmulgee, Okla.; Tharrat G. Best, 265 Genessee Street, Utica, N. Y.; Malcolm C. Brock, 705 West Market Street, Akron, Ohio; Albert T. Canby, 85 Cooper Street, Woodbury, N. J.; Lt. Comdr. Penn L. Carroll, U. S. Naval Observatory, Washington, D. C.; Charles T. Ellis, 5009 Iroquois Avenue, Detroit, Mich.; Lieut. Irving Fineman, C. C., U. S. N., 2143 57th Street, Brooklyn, N. Y.; Henry F. Goldsmith, 2308 North Broad Street, Philadelphia, Penn.; C. Wesson Hawes, 189 Church Street, New York City; Adelbert D. Hiller, The Bradford Apartment 303, 1800 K Street, N. W., Washington, D. C.; Leslie A. Hoffman, American Tube and Stamping Co., Hancock Avenue Works, Bridgeport, Conn.; Osgood W. Holt, 1066 Smithfield Avenue, Saylesville, R. I.; Henry D. Hopkins, 72 West Adams Street, Room 600, Chicago, Ill.; Vincent Panettiere, 3845 Garrison Boulevard, Baltimore Md.; Roberto M. Salazar, care F. Quezada, E. San Jose, Costa Rica; Thomas M. Searles

Aetna Life Insurance Co., Memphis, Tenn.; Frank S. Small, Miami, Ari.; Haig N. Solakian, 212 Huntington Avenue, Boston, Mass.; Edward F. Twomey, 1200 Jones Building, Pittsburgh, Penn.; Neal E. Tourtellotte, University Club, Seattle, Wash.; Clifford D. Winton, 10 Morningside Road, Worcester, Mass.; Joseph T. B. Woodruff, 415 Belmont Avenue, Springfield, Mass.

1918

JULIAN C. HOWE, *Assistant Secretary*, 551 Tremont Street, Boston, Mass.

Since the first of the year we have really gotten to work on our organization plan and without talking any more on "what we are going to do," will show the results of what we have done to date. To start with, we picked out a man from each course whom we thought would fill the bill, and wrote him, asking him to do the work of course secretary for his course. To date we have heard from eight men all of whom have accepted the job, and promised to do their darndest. In case you have not heard from them yet, they are as follows:

Course	Name	Address
I	Longley, John Robert (Bob)	5101 Kimbark Avenue, Chicago, Ill.
II	Fletcher, Saxton W. (Sax)	care W. L. Fleisher Co., 31 Union Square, New York City.
IV	Wills, Royal Barry (Bill)	653 Franklin Street, Melrose Highland, Mass.
VI	Poteat, John R.	care Lockwood Greene & Co., 38 Dearborn Street, Chicago, Ill.
VIII	Hermann, E. O.,	care Tiffany Enameled Brick Co., Momence, Ill.
X	Ryan, William P. (Bill)	care Eastern Manufacturing Co., South Brewer, Me.
XI	Bond, Nelson A. (Nellie)	Waldoboro, Me.
XV	Bassett, Clarence E.	care Young Men's Christian Association, Providence, R. I.

Eventually they will get in touch with you and ask you for news, but don't wait for them to write. Write to them first and let your friends hear from you and know where you are and what you are doing. They will all appreciate it, I am sure, and you will be doing a small but necessary part toward keeping up the spirit of the Class — a hard thing to do, now we are so widely scattered. It only means one letter for you, but if several men in each course write in unsolicited, see how many letters it saves for your course secretary, who has no more time for Class work than you. Do your share and let us hear from you. Don't be a parasite and enjoy the news of the other fellows without contributing something yourself. We haven't heard from the men representing the other courses yet, but as our letters have not been returned, presume they are thinking it over and during that solemn process have forgotten all about us. Meanwhile the April issue goes by with only accidental news from their courses. However, when the present rush is over, we shall write them again, gently reminding them of their sins and giving them one more chance. If they don't come through then, we can't wait for them any longer, and shall appoint someone who will put the job through right. These secretaries must be *pushers*, not the kind that like to be towed. Now for some news:

Course I coming first in the alphabet I mean the figurebet, we will give it the place of honor for that and no other reason. Bob Longley writes as follows: "I will be glad to help 'edit' Course I news for the REVIEW. The plan of subdividing the work sounds like a more effective way of covering the news of the Class and ought greatly to lengthen our column every issue. How one man could cover all the men in the Class, especially those not in his course, is hard to see." *Dog gone* he's right! Great minds usually differ in some degree, but this is a notable exception. "What are you doing these days, Julian? (Already out for news dope, you see!) The last time I saw you was in our muddy campaign at Camp A. A. Humphreys. I think I am correctly informed that you are no more a single man. Many congratulations!" Yes, Bob, right again, but you should tell it all. We are the proud parents of a baby boy, William Eastman Howe, and I'll put him up against any baby in the Class, for he can't be beat. You poor old bachelors don't know what you are missing — get busy, fall in line, and you'll really begin to live!

Bob goes on to say: "An evening or so before New Year's we had an unusually

successful Technology party in Chicago when the Musical Clubs made a trip out this way again. They treated the local Tech men and their ladies to the best concert of the kind I ever heard. The party brought back a lot of memories of the days of 'Shorty' Carr and of the other fellows who used to be in the Clubs. There were quite a number of '18 men there, Irwin, MacCausland, Dawson, Bushee, Woodward, Frazier, Sturtevant, Poteat and Longley. Will give you a better line on their activities later on.

The letterhead above will give you an idea of the work I am now doing." (His name isn't on it, so we won't hurt his feelings if we don't reproduce it.) "You may have heard of the firm or its members before. They are all three Tech men, Pearse, '01, Hansen, '03 and Greeley, '06. They were all students of hydraulic and sanitary engineering and certainly are good in that profession. For the last three years I have been almost continually on the water supply end of their work."

Bob reports that 1918 won the honors March 14 at the annual banquet of the Chicago Technology Club, when it received a silver loving cup for having the best attendance. 1918 can be famous in Chicago if it can't around Boston, where most of the Class are at present.

Craig P. Hazelet reports from the college town of Urbana, Ill., where he is now instructing in the civil engineering department of the University of Illinois: "Since I left the Institute I have seen just one of the Class — H. R. Lacey. That was shortly after I left the service in 1919. I was with Professor Spofford's firm that year until they finished the Springfield Bridge, then went with the Boston and Albany Railroad, bridge department. Stayed with them on design and inspection work until I got a chance to go to Canada on a mill job for a mining company. My work there was both inside and out in the field as superintendent. After the completion of that job I went to Detroit with Smith, Hinchman & Grylls, engineers and architects, I remained there one year and then came here to the University of Illinois as instructor in structural engineering. This is my second year here and I've enjoyed it very much. Yes, indeed, I've been married for over one and one-half years and have a small daughter, Suzanne Ruth Hazelet, by name. If you ever get down this way look me up. (806 South Third Street, Champaign, Ill.) We have a Tech Club here in the university composed of faculty members."

Pete Harrall is in the office of the vice-president of the Western Union in New York City.

Rudolph Beaver writes in part as follows: "Bob Longley urges me to help fill up the '18 column of the coming REVIEW. Although I am railroading with the Lehigh Valley, in reality I am but marking time, waiting for good times to return. I have had a good position, that of process engineer with the International Time Recording Co., Endicott, N. Y., but alas! Bill Kaiser, of 'hock der Kaiser' fame interfered. Marriage? Lollypop! Any mutt can get married, but it takes a man to stay single. I think by 1924 we'll all exchange our jobs for positions. Calamity howler, you'll say. I envy you your living in Boston."

Rudolph reports to Bob that C. C. Carpenter has established himself in contracting at Norfolk, Va. Doing well, but had an awful time for two years. Best luck to "Carp" — the first hundred years are the hardest in that game.

Here's a word from Mike Malley. The last time I saw him, he was bossing the job of getting a big Liberty truck out of the soft Virginia mud one very rainy Sunday at Camp A. A. Humphreys. He writes as follows: "Dear Bob: I'll say that it was somewhat of a surprise to open the mail and find a letter from one of the long-lost gang. It sure was fine to hear from you again, as I haven't heard a sound since the day you and I went various directions in Camp Humphreys, and I haven't run into any of the gang that knew or heard anything about you since that time, and to read and know about Bob. Concerning myself officially; discharged U. S. A. in March, 1919, superintendent in charge of road construction — three miles concrete road — in the City of Pittsfield, Mass., during 1919. Joined the Turner Construction Co. of New York as draughtsman in their Boston office. Successfully transferred to field duty, to Philadelphia district as assistant superintendent to assistant superintendent on a \$500,000 eight-story paper warehouse in Baltimore, and then back to Philadelphia as superintendent of construction. At present in charge of construction of a six-story factory 100 x 100 reinforced concrete, flat slab design for Turner. Don't let your communications be for business only now that the lines are established once more. Loosen up, tell me more about you and yours — I reckon you got 'em, and tell me where Jim is."

Frank Creedon is working for Powers Brothers, Brockton, on road construction.—Tom Donnelly is a salesman for the Eastern Felt Co. in Winchester, and is living at 65 Brattle Street, Arlington.—Phil Craighead is with the McClintock Marshall people in Pittsburgh, Pa.—H. R. Lacey, lieutenant (j. g.) Civil Engineers Corps, U. S. N., has been stationed at the Boston Navy Yard since the first of the year.

Bob goes more into detail about himself and others in a later letter as follows: "Except for a short time I have been working with the firm of Tech men, Pearse, '01, Greeley, '06, and Hansen, '03, since getting out of the army shortly after the armistice. The firm is engaged in hydraulic and sanitary engineering work, with headquarters in Chicago. Practically all my time has been spent on the water supply part of the business. About a year was spent as resident engineer on the construction of a filtration plant for the City of Whiting, Indiana. Before leaving Whiting I was engaged with the Standard Oil Company of Indiana for about six months, on an industrial sewage problem. Recently I have been working on a plan for a badly needed water supply development for Litchfield, Illinois. I think this town must have been the one Professor Porter once told us about, where the people after their daily tub, use a paddle, instead of a towel, to scrape off the mud. Brother Ned and Walt Robertson had a short line of publicity in the *Review* not many issues ago, but as far as I am able to deduct from frequent communications from East Orange, when they are not enjoying the social whirl, they are still working for the Lock Joint Concrete Pipe Co. J. E. recently wrote of having met 'Monk' Pierce rather unexpectedly in New York City. He says that until about a year ago Marvin was with the Lord Drydock and Construction Co., designing and building drydocks. With the slump in shipping and the general business depression he accepted a position (no job) with the McCall Publishing Co., and is now an assistant to the president! He is now living in the Bronx with Mrs. 'Monk' and their two children."

Monk described it himself as follows: "Since the last time I saw you I have taken unto myself a wife and have one boy six weeks old and a girl about two years old, with the measles. The rest of my habits you can imagine for yourself. This is the best alibi that I can present. I suppose that you are wondering how I landed with a ladies' fashion magazine, just as I am wondering what you are doing with the Boston Garter people, but I suppose, we both left strict engineering lines because it has been a mighty cold winter for the technical graduate. I hope that your shift will prove as advantageous as mine. I would be very glad to have you look me up if you come to New York, but at any rate, drop me a line and tell me about some of the fellows we are both interested in. Very truly yours, *Marvin Pierce.*"

We received a most severe call-down a few days ago from our classmate, J. Giuranovich, for getting news of him twisted but we are not worrying, as it brought him out in good shape, and we got more news than perhaps we ever would, by making that mistake. The board of editors (I should have spelled that bored) hereby gives fair warning, that if our news of any one is scant we may use this most effective weapon again, tell some stories about him, and you will find the complete story in the next issue. Jerry's letter follows:

"Referring to your note in the last *TECHNOLOGY REVIEW* as to our business, we wish to inform you that your correspondent was misinformed. We are handing you full details of our venture. Hoping that you will find it convenient to correct the note.

Hello Julie: How goes? You will pardon the above letter, I know. Really, it is quite impossible for me to forget business, so that at a time when I should write a personal letter, I find myself corresponding in the usual stilted business form. Yes, I am in business. We're sales engineers (whatever they are) and we're engaged in making ourselves nuisances in the offices of architects in this locality. We are doing propaganda work for a nailing concrete. My greatest difficulty so far has been to convince architects that I have for sale concrete which will hold a nail — most of them think that all I have is a concrete head. But you see, I tell them that the concrete I am trying to interest them in is quite unlike my head, in that it is both hard and soft at the same time, a truly remarkable thing if you think it over. Oh, yes, the world does progress. Aside from this, we are also installing pressed steel stairs. We have had only one objection to our stairs thus far. Our stenographer, an erstwhile Simmons widow, stated in no indefinite terms that our stairs were absolutely of no use, being especially objectionable in that they were not designed for two. Not being well versed in the matter, I could not meet her objection with a plausible argument, so I referred the whole thing to our home office.

You also said that Max Seltzer had an office in our building. That is quite true. He

and C. C. Stewart, a '19 man, constitute the firm of Seltzer & Stewart, chemical engineers. They occupy, with us, spacious offices at 8 Beacon Street. They are doing a land office business, but I have my suspicions as to the extent of their operations. Confidentially, I saw both Max and his colleague walking around with an overgrown jimmy, which would do honor to the best burglar conceivable. We have had quite a number of '18 men call on us. Due to the proximity of the offices, both firms get a chance at all entrants. George White was in one day. After trying to sell us some insurance, he decided that he had better get on the buying end. We have him all tied up. When he takes the step — you know what I mean — he is going to build a palatial mansion for which I expect to be the architect and engineer and also violate ethics by putting in the floors and stairs. Mr. C. H. Watt the eminent mining engineer who has been sojourning in Alaska (I wonder if one can get a drink there!) paid us a visit and had quite a few tales to tell. Both firms had lunch on Mr. Watt's expense account that day. A few more visitors like him and the firms would be on a paying basis.

Aside from associating with such things as chemical engineers, I have done nothing rash. It does offend my artistic temperament to be brought into contact with persons who are engaged in acting as consultants for rubber plants. You see I always thought that rubber plants were things that one puts on the porch to enhance the beauty of the place, but after meeting the engineers referred to above, I am convinced that my education, in so far as rubber plants are concerned, has been wisely neglected. I might mention that they carry as a side line perfumes in small vials. This is, of course, just as it should be. I hope you get my point.

I suppose that by now you have quite a good perspective of what our business is. The next time you get around this way drop in. Best wishes and all that sort of thing. Sincerely, *Jerry*."

Jack Hanley has joined the benedicts (I think we ought to begin to count noses very soon) and as we have had the pleasure of meeting his wife we can forecast a very happy future for them. They are living out in Milton — 25 Austin Street, while Jack is located in town with the Associated Factory Mutual Fire Insurance Cos., as assistant fire protection engineer.

Sax Fletcher almost threw me down on the grounds of being so very busy (and if he works like most of the industrial engineers he *is* busy) but he agreed to do his best and we look for no better from any man. He writes as follows:

"Many congratulations, Julie, on the youngster. That's as good news as I have heard for a long time. Speaking of news, reminds me that I have something to tell the boys, also. I decided that the '18 bunch were getting too much of a start on me and took the first degree of the fatal step not so long ago. Name, Louise Kitchell, residence, Boston, so you can see I had to come back to the old town to get the right one. I do not know when I'll get married, but will keep you informed. As to the rest of the news from our Class, I regret to say that although I received the cards all right, business has taken me out of town so much since then that I have not had time to do much with it. Don Bradley, IV, has recently gone with the American Splint Corporation who are going to start manufacturing matches in Canada. He is to be located at the factory, Berthierville, Quebec. — Gard Gould, II, is here with the Holmes Protective Agency and when you ask Gard what his business is he says, 'Burglary.' That seems to be the only thriving business nowadays, so I guess Gard is doing very well. You might put a word in the REVIEW, telling the fellows around New York that they are serving excellent meals at the Tech Club now at reasonable prices, and that they will find a bunch of the recent graduates around any time they drop in. I'll try to have more news for the next issue. Sincerely yours."

Evidently our work is being appreciated by some, for we have had a number come in, speaking of the results and wanting to help contribute to future issues. This is certainly encouraging and we hope several more will do the same thing. If we can get the men in the Class interested in hearing from each other, everything will go along automatically, and letters such as have come in this last month certainly show that this interest is spreading.

One of the letters we had in mind when writing the above was from Stan Cummings, II, who is located at the Oregon State Agricultural College, Corvallis, Oregon. He writes as follows:

"Dear Howe: After reading over the January TECHNOLOGY REVIEW, I am glad to

find a little information concerning the Class of '18. Our section in 'News from the Classes' has certainly been small in the past, so here goes to help you out a little. To go from the sublime to the ridiculous, I am now teaching at this college with the official title of assistant professor of mechanical engineering. (Guess some of our classmates will smile.) This is rather an out of the way place for me to find news concerning many of the other boys, but on my way out here, I met Bob Derrah, II, on the boat from Vancouver to Seattle. He is in the heating and ventilating engineering business in Salt Lake City. Hadn't been here more than a couple of weeks when I met Ray Powers, VII, who is doing work here for the Government. He represents the United States Bureau of Chemistry in the States of Oregon, Washington and Idaho, his work being the dehydration of fruits and vegetables. H. V. Sturtevant, II, is employed by the Sullivan Machinery Co. in Claremont, N. H. Had a letter from Maggie Magoun, II, a few days ago. He is still instructor in naval architecture at the Stute and taking graduate work for a master's degree. He also said that they have just welcomed a son, Richard, into the family (February 12). The last I heard of Ballentine, II, he had taken over the running of a machine shop in Ware, Mass. He is also father of a fine girl (this may be old news). Mort Beattie, II, I believe, is still with the Keith Shoe Company in Brockton, Mass. A. L. Hamilton, II, is in the steel business in New York City, his address is Technology Club.

Guess this is all I can tell you for news and some of this may be rather stale. Can you tell me whatever became of Henry A. Berliner, II? I expect to be in San Francisco this summer and may run across some of the boys there. If so I'll let you know. Wishing you success in our news column."

Parker H. Kennedy, II, is located in Middleboro, with the Crew Levick Oil Co. — Harry Levine, II, is still with the Draper Corporation in Hopedale.

We got glimpses of the following men at the alumni dinner early in January. This is old news for those who were there, but will be welcome to the others!

L. I. Levine is with the General Electric Company in Lynn — address, Cherry Street Lynn, Mass. — Ralph G. Mahoney has a real job. He is manager of Sterling Inn at Sterling, Mass. Just keep that in mind when in that vicinity. — Elmer E. Legge is located in Worcester with the American Steel and Wire Co. He is married and has a daughter. — Carl McLaughlin has been married recently in Portland, Me., and is now located in Dayton, Ohio, instructing at the aviation field. — George E. McLaughlin is working for the Turner Tanning Machinery Co., manufacturers of hide and leather working machinery at Peabody, Mass. He is living at 112 Davis Avenue, Brookline, Mass. — Harold L. Miller is instructing at Franklin Union here in Boston and living at 28 Conrad Street, Holliston, Mass. — A. E. Windle is with the Tidewater Power Co. at Wilmington, N. C. — W. H. Kayser and Sam Chamberlain are with the International Time Recording Co. at Endicott, N. Y. — E. A. Sidman is married and has a daughter. His address — somewhere in Boston. — H. C. Levine is now assistant master mechanic with the Draper Corporation at Hopedale. He is in charge of power and maintenance work and general shop engineering.

I see Ralph Whitcomb most every day at lunch now. He is with F. L. & C. E. Whitcomb, Inc., building contractors, located at 19 Wareham Street, Boston. He reports that M. W. Weisopf is an assistant superintendent in the Saco Lowell shops at Lowell. — Franklin Wells is back at the Institute on the road to a master's degree. — E. B. McCarthy was at the alumni dinner apparently home on a short furlough. He is a captain C. A. C., commanding Battery A, 51st Artillery at Camp Eustis, Va.

Chink Watt was the man chosen to represent Course III, but apparently my letter is still chasing him around Alaska, so we haven't much news of the miners as yet. However, our hopes are still high and I know you will hear from him before long.

Al Grossman dropped into the office the other day and gave a very good account of himself. He found mining very dull, so switched over to a steady job with the Massachusetts Highway Commission with whom he is certainly making good as the following report from Professor Locke shows:

"Alfred Grossman, III, has been assistant engineer with the above department of public works since last May. Last year three miles of macadam road were built in Woburn under Engineer L. Hoyt, II; they had also two other Tech men with them. Six hundred feet of this road was built under Grossman's supervision and included several several concrete culverts and one reinforced concrete bridge; two curves with a radius of

about a thousand feet were banked sixteen inches. Five thousand cubic yards of ledge were removed and here Grossman's mining experience came in very nicely. He is now at District 7 office in Middleboro waiting the opening season, the major projects of that district this year being in Hingham, Edgartown, Pembroke and Rochester and mostly concrete. There are sixteen of them in the Middleboro office getting plans and data ready for the coming season. Three of them are Tech men."

E. C. Layng is back at the "stute" working under Professor Locke.

Bill Wills certainly has been on the job for Course IV and if the architects don't win this issue, it won't be his fault. He writes as follows:

"*Dear Howe:* On February 10 or thereabouts I sent out an architectural questionnaire, or call for news and on the following few days braced myself for the onslaught of replies, but I couldn't say that I have been exactly burdened with news from the wielders of the brush and pen although the fellows who did write sure handed me just the news I was looking for."

The following card speaks for itself. "Yours to my son Amory L. Williams has been forwarded to him. He is at the Academy in Rome measuring details from the top of a forty-foot ladder."

Ted Wright was the next one to come through. He says in part: "In connection with your request for information I now have a position with the Curtiss Aeroplane and Motor Corporation, Garden City, N. Y., as executive engineer. I am married. From the above you can see how I have drifted away from architecture and am now entirely in aeronautical engineering. However, no course that was given at the Institute (aside from an aeronautical engineering which was just starting in 1918) could, I believe fit one better for the design of aeroplane structures. I should be very glad to hear from you again or from any of the rest of the gang who are around Boston."

Don Bradley writes that after two long years in the wilds of Canada, California, Mexico and then Canada again he is glad to be in little old New York once more. He is field engineer with Marc Edlitz & Son and is at present working on the New Federal Reserve Bank Building. He goes on to say: "Dave Sanford is the only 1918 architect that I ever see. He is still wearing his smock and working for an New York architect. Ted Winslow is with the W. B. Richards Co. and takes numerous trips to Canada and California, where he is now, and other parts of the country. I am single, but still trying very hard. I am here permanently (the Tech Club) and am looking forward to seeing any of the old gang if they will only drop in here."

"*Dear Wills:* I am in receipt of your letter of February 11 asking my personal history in the last little time. In answer to your inquiries will state that on October 1 of last year I became a member of the firm of Ware, Treganza & Cannon, which has been in business here for a number of years. As is the case in all architects' offices out here, our work includes anything from three-room houses to high schools costing over the hundred-thousand mark. My work here has given me a chance to talk on old houses of Utah, of which we have some very lovely examples, built by the pioneers. I have talked before high school classes, and before the university students on planning of homes, what architecture really means, etc. We have almost no architectural tradition to build on here. The architects of the A. I. A. Chapter are nevertheless attempting by thoughtful study, by constant research and thought to develop eventually a lovely architecture that will be thoroughly indigenous to our locality here. You Easterners can scarcely appreciate what our local conditions are with our desert climate in summer with its brilliant sunlight, and our freezing and thawing winters. Moreover we are much affected in the design of our buildings, by the background, which may be either our magnificent mountains or the flatness of the valley, and in the search for the solution of our architectural problem, influences such as the training Tech gave us, her students, are making themselves felt. Architectural work out here is still open to pioneering. Due to the efforts of a few of the older architects, people here are beginning to appreciate somewhat the value of real quality in building, but for the most part it is a far cry from the architecture we get here today, to the lovely colonial houses of New England, the fine work done by Meillor, Meighs and Howe of Philadelphia, and the very lovely things done in New England and some places on the continent. But appreciation of architecture is really growing apace and it is interesting to be among the first architects to lay the foundations for the future development of quality and beauty of building here.

Aside from the above, about the only item of personal history is to say that I was

married the first of December last year to Miss Phyllis Winder of Salt Lake City. Yours very sincerely,

GEORGIUS Y. CANNON."

Herb Hatch writes as follows: "*Dear Bill:* It being the eve of George's birthday, I'll answer your questions as truthfully as possible; having just had a little practice in making out my income tax report will also help. Soon after our last meeting in Lawrence, and not having succeeded in locating anything nearer home, I came here, Rochester, N. Y., to design school buildings for the department of buildings of the Board of Education. There is a marked shortage of schoolroom space in the city and the eight draftsmen in our office are kept very busy, to say nothing of the work being designed by the private architects. There are fourteen jobs at present in process of construction here.

I'm still single."

Dick Richards has the right idea — a real feeling for us poor secretaries. He writes as follows: "*Dear Bill:* I am in receipt of your touching appeal for news for the REVIEW. I suppose I am one of dozens who eagerly scan each issue for news of their former classmates, without contributing any about themselves, having sort of a feeling that the Class secretary, or whoever gets up the stuff, does it by mental telepathy and there is no particular obligation for each fellow to furnish news about himself. I hope your letter will ferret us all out of our holes and arouse the old interest in each other's work and doings. After leaving the Navy in the spring of 1919, I came back home to Columbus and went to work in the office of this firm of architects, of which my father had been the head for about twenty years. I dug out my textbooks and got busy on the work of becoming their chief structural engineer. I spent about a year in charge of the structural design for new buildings for the Ohio Penitentiary. Just about a year ago my father died very suddenly while on his vacation in Florida and since that time I have been very busy closing up his affairs and going through a period of reorganization in the office. Since the first of this year I have been a member of the firm. The early summer, here, as in a good many other places, was a very dull time. Things began to pick up in the fall and since Christmas we have been so busy that we have hardly known which end of us was up. Everybody seems to be wanting plans and wanting them in about half the time that it ought to take to prepare them. Far be it from me to complain, however.

Am I married? I am. I was married to Miss Harriet Hunt of Newton Centre in October of 1918, and I am pleased to state that we are still on somewhat more than speaking terms. We have two children, a boy and a girl, both as gentle and quiet as could be desired — when asleep — and keeping their parents on the jump to keep up with them all the rest of the time. One thing is very greatly in their favor, they have generally chosen the same hours to sleep that we have.

As for books, I have had little time of late for any, improving or otherwise. I have even reached that state where I consider the study of the family budget book a hopeless and impossible task."

Here's a real one — Van sure did stretch his art, but he seems to be getting away with it. Here's what they say about him:

"The Christmas edition of *The Daily Star* would not be complete without some delightful cartoons of L. F. Van Zelm, and here you will find them ready to hand you a good genuine laugh and to help put you in a congenial frame of mind for Christmas.

Mr. Van Zelm is well known to the readers of this paper. Children and grown-ups watch for his 'Villagers,' printed on the first page every Monday night. He takes the most frightful liberties with our prominent citizens, he burlesques them in a most pronounced way, he libels our streets, our buildings and our dearest landmarks, but nobody ever gets mad. Even the fellow who is burlesqued outdoes all others in laughing when he sees his own picture.

Van Zelm, sad to say, came near being a banker. With three uncles in the business and his father vice-president of the New York Life Insurance and Trust Company, such a career was almost preordained for him. But he escaped to the eventual glorification of the Fourth Estate.

He was born in New Rochelle and was educated in the public schools until he reached the age of fourteen. Then he entered preparatory school at Lawrenceville, N. J. He later entered Princeton, but, inclining to an architectural career, he broke off his Princeton course and enrolled in the Massachusetts Institute of Technology. Again his ambition swerved and he got it into his head that cartooning would be a more diverting occupation

than architecture. Before leaving Tech he received an offer to cartoon for the movies and accepted the opportunity. He continued in that line of work for several years.

Since 1918 he has been drawing comic strips for the Bell Syndicate and the *New York Evening World*.

Daily Star readers enjoy Mr. Van Zelm's cartoons too much to require any boosting from us, but it may be said, truthfully, that a Van Zelm cartoon is good for a laugh any old time, any old place and no matter how little you may think you feel like laughing."

And this is what *he* says about it:

"*Dear Bill:* Well, you old horse! Received your note yesterday asking for news concerning 1918 architects, and I will endeavor to answer your questions as put. Where are you? I am home just at present — in fact I'm here most of the time, as I do practically all my work here — the address being Edgewood Hall, The Esplanade, Pelham Manor, New York. What are you? — God only knows. If I am what my friends(?) say I am I hope I ain't. Nevertheless, I have mustered up enough courage to appropriate to myself the term cartoonist or artist. The usual conception one has of a cartoonist is a man hurriedly turning out comic pictures with one hand, and raking in the mazuma with the other. One might say I do this — with the exception of raking in the mazuma. The usual conception one has of an artist is a man slowly turning out beautiful paintings with one hand and figuring up how he's going to (or should I say *where* he's going to?) eat with the other. One might say I do this — with the exception of turning out beautiful paintings. From the above I would appear to be a cross between the two — turning out comics with one hand and figuring where to eat with the other. Now judge for yourself, Bill.

I might say, however, that I am drawing a daily comic strip entitled 'Aw, What's the Use' for the Western Newspaper Union, Chicago, Illinois — and am also doing an advertising cartoon entitled 'The Villagers' which is being syndicated throughout the United States by Andrews-Bill, Inc., and the Chester Syndicate of New York City, and by the Edstrand Advertising Company in Europe.

I am enclosing a couple of pictures as you requested.

Are you married? — I should say I am and I doubt if there is a happier married man than I. Have been married about three years now and still living in the land of romance. What improving books are you reading? — This is rather a personal question — why insert the word 'improving?' What modeling classes do you attend? — None.

Would it be of any interest to you to know that your old friend has been trying his hand at scenario writing and poetry during spare moments?

Well, I guess I've spilled enough chatter for a while. With love and a kiss. *Van.*"

Bob Gidley writes as follows: "*Dear Bill:* One of the most delightful features of the 1918 section of the *REVIEW* has been the entire absence of news of myself. But all good things eventually come to an end and your recent appeal to the architects moves me to contribute the following fleeting personal glimpses which may or may not serve as a warning to future followers of the art of McKim.

Left Boston via the Boston & Albany in the early part of 1919. Train was on time. Spent nine months in Columbus, Ohio, in the office of Richards, McCarty & Bulford, architects. Learned that window details are almost as important as entourage. Left soon as I discovered Ohio was a training ground for Presidents. Reached San Antonio, Texas, December, 1919. Supposed to be a very dry climate even before prohibition. Arrived in a rainstorm. Rained for a month. Attached myself to the force of Alfred Giles Co., architects. Still attached, at present as a member of the firm. Architects are not supposed to advertise but this can hardly be considered an advertisement of the firm.

Attained membership in the American Institute of Architects. Am at present a local correspondent for the Beaux Arts Institute of Design. Made a speech before the Architectural Club — once!

Married — yes, to a Texas girl. But it wasn't so easy. Chaps are not as popular in Texas as in the olden days.

There is a Beacon Hill here and a Boston Shoe Store and trolleys — and the people kick about the fare just the same as they do in Boston. I am living at 1138 West Summitt Avenue in a bungalow of my own design and I spend a good share of my spare time trying to get the grounds to look like the Public Gardens. I am sure this is more than enough, but I enjoy reading about the other fellows so much I feel that I ought to reciprocate and make a full confession."

Palmer writes very interestingly of his work in Mexico: "*Dear Bill:* Mighty glad to

hear from you. As you ask me about a dozen questions about myself I shall answer them in the same order. Yes, I am an architect. At present I am superintending the construction of the Monterey Casino here in Monterey and expect to be on this same job for eight more months. It is about half complete now. It is a reinforced concrete structure faced and trimmed with stone. It is my own concrete design and everything is in the metric system. I represent Alfred Giles Company here in Mexico. Yes I am very much married, having two of the huskiest little boys imaginable. No, I am not attending any art classes, but go to most of the bull fights that come along. It is springtime here and the orange trees will soon be blooming and at the same time their limbs are full of yellow ripe oranges."

Bill adds these last notes as the news goes in. "I have just received a card from Ken Reid, saying that he is on the way back to Boston from India, where he has been for the past year. He is going by way of Rome and intends to call on Grunsfeldt and other fellow architects, at the American Academy. I'm afraid he will miss Grunty, for from last reports he was wintering in Algiers. Otto Lorenz writes that he is just recovering from an operation which has kept him in bed for the past six weeks. He is with the India Rubber Products Co. at Madrid, Spain.— Means and Sam Fuller are now with the Turner Construction Company in their Boston office.— J. T. Whitmore was last seen with Andrews, Rantoul & Jones, architects, at 50 Congress Street, Boston."

C. W. Dow, V, apparently has a soft job with some relatives — he is on the production end of John E. Dow Leather Co.

Johnnie Poteat represents Course VI, but hasn't really gotten down to work yet. He is apparently located with Lockwood, Greene & Co., at their Chicago office. He writes as follows: "*Dear Julian:* Since you are a 'Boston Garter,' I suppose if I don't come across with some news you'll 'hold me up,' but be sure you do it with a 'Velvet Grip.' I saw Bob VanKirk down in Boston shortly after he had put you up to writing to me and he admitted his culpability and excused himself apparently with no prick of conscience. There is a saying which must have been started by one of Noah's sons in the ark when he said he was too busy tending the animals to watch for the return of the dove. That saying has persisted until now and I find myself using it — too busy, not bossing the foxes but foxing the bosses, to get together the material you want. I started looking through our Class roll the other day and found so many Course VI men that I gave up the hunt for a more opportune time. Suffice it to say the Class of 1918 won the cup for the largest attendance at the annual dinner of the Chicago Chapter of the Alumni Association. One of our number got the prize for being the most profane, while a second got the name of 'hardest drinker' attached to him. This should commend Course VI to the world at large since neither of those accused and found guilty was of our number."

H. E. Richards left the turbine department of the General Electric Company at Lynn in October to accept a position as instructor in electrical engineering at Northeastern College. He is teaching alternating current machinery and laboratory.— F. B. Philbrick is with the Gamewell Fire Alarm and Telegraph Co. at Newton, Mass.— Carlton E. Tucker is an instructor in electrical engineering at M. I. T. He is in charge of the dynamo laboratory and is teaching the option in telephone engineering.— Erving G. Betts is connected with the engineering department of the New England Telephone and Telegraph Company at 50 Oliver Street, Boston.

E. Olney Herman represents Course VIII and writes as follows: "*Dear Howe:* I read in your postal card that congratulations are in order. You didn't state whether it was a boy or girl, so I don't know whether to congratulate you little or much. However, you can at least knock four hundred dollars a year off your income tax from now on, and that is something. Regarding news, my dear fellow. Do you realize that I did not receive the name and address cards until last week, and consequently haven't even had a chance to get replies to my letters (assuming that the people are at the address you sent)? I am very sorry that we can't have anything in the April issue, but I promise to have something for the next one or you can publish my obituary."

J. Alston Clark writes from "God's country" as follows: "*Dear Julie:* Appearances to the contrary I was pleased to get the invitation to your wedding. I trust that she is beautiful, clever, capable, and is possessed of the best of judgment save in that she thinks that you are the most intelligent and worth-while man living. I have recently become a subscriber to the REVIEW and find that it is most satisfactory and entertaining. Between it, *The Tech*, *Tech Engineering News*, and *Voo Doo*, together with one or two fairly regular

correspondents in Boston I manage to keep in fairly close contact with what goes on at the 'Center of the Universe.' However, the contact is not so close that I should not be better pleased to dispense with intermediaries.

I have said that I find the REVIEW 'most satisfactory,' but that is not strictly true for when there is so much being said about education, and educational policies, I should like to hear comment from recent graduates, comment in profusion. I have never seen an adequate statement of the policy of the Stute, but I am inclined to believe that 'quantity production' is the chief idea. Personally I am more in favor of quality, and should like to see Technology the center of the best and most profound engineering and scientific works in the world. And incidentally I believe that the Dean's institution of 'Undergraduate Activities' offers greater opportunities for liberal culture than a course in 'Appreciation of Music.'

Sorry that I can't support your business any better than I do (your garters hurt my legs when I am on horseback, and that is the greater part of the day). In spite of this, I should like to sell you some long-staple cotton at a fancy price."

Bill Ryan certainly has corralled a bunch of news from Course X and I want to congratulate him on his work. Incidentally it is a great help to the secretary to have the news all edited and in proper shape to print. Of course the news is the important thing, but it reads much better if written up with a little razz and josting mixed in, and the course secretaries are the ones to do it. Bill writes as follows:

"The first letter we received in reply to our 'Who's Who and Why' of the Course X crowd was from Waldo McGuire. 'Mac' is an instructor in chemistry at Rhode Island State College, Kingston, R. I., and at the time of writing was giving the 'frosh' general chemistry (from Al Smith's w.k. book, no doubt) and was leading the sophs from Noyes' Qualitative (memories of that frying pan on the top of old Walker) into Talbot's Quantitative. We wonder if Mac keeps one of those checkerboards with the multi-colored squares to show the boys how hopelessly behind they are, *a la* Belcher. He reports seeing Milt Read in Providence, R. I. where he is in charge of recruiting for the Army; also Ben Franklin, who is with the W. S. Finishing Co. of that city.

Joe Kelly is back home for a time after eighteen months in the oil fields of Oklahoma. He refuses to give any dope about it, which leads us to suspect he has a gusher located. He reports that Dutch Engelbrecht, our classy left fielder, is also out there.

The old Class is due for some oil millionaires, for George Brewer, who is with the fuel section of the Bureau of Mines, has been in Oklahoma for the past year driving a 'hoopie' (Oklahomian for Ford) around the Indian Reservation. We hope George will remember the white man's treatment of the poor Indian and not stake off too much of the Reservation for his own. As a result of his work a Bureau of Mines report — 'The Use of Low Pressure Gas Burners in Oil Field Boilers' by George S. Brewer, M. P. Youker, and C. E. Beecher — was published by the Osage Oil and Gas Lessee's Association of Tulsa, Okla.

And from the Windy City, Jim Irwin reports that he is with The People's Gas Light and Coke Co. of Chicago as student engineer. He also has burst into print with a paper on 'Measurement of Gas Flow' — presented at a meeting of the Chicago engineering section. Jim is strong for Chicago, which may be due to something besides his work, but this he strongly denies. He is rooming with R. I. Bushee, XI, and sees Bob Longley, I, Norm Dawson, XI, and Jack McCausland, II, all eighteeners, quite often.

Max Seltzer handed us a surprise when we glimpsed the stationary heading — Seltzer & Stewart, chemical engineers, 8 Beacon Street, Boston, Mass. Max says that getting started has been slow, but that things are now coming their way (brick-bats, damage suits, etc.). They are acting as New England representatives of the following: The American Atmos Corporation, pulmotors, tubular masks, etc.; the Mono Corporation of America, CO₂, SO₂, etc., recorders.; The Pneumercator Co., Inc., indicating gauges, etc.

Max reports that Cliff Bellis is a service engineer for the Bellis Heat Treating Co. of New Haven, Conn. We happened to note the following in the February, 1922, *Journal of Industrial and Engineering Chemistry*: 'The Flow of Fluids through Commercial Pipe Lines' by R. E. Wilson, W. H. McAdams and Max Seltzer. The boys may remember Tommy Knowland and Max taking turns kicking the little piston pump in the Industrial Laboratory to make it push the fluids around.

Earl Collins reports that the Alumni Office insists that he is a '19 man; that's noth-

ing Earl, Ken Akers, the '20 secretary, keeps writing us to be a loyal '20 man and send in our dues. He is with the Pittsburgh Plate Glass Co. of Boston, and has graduated from boss of their shellac bleachery to sales promotion work. Earl announced his marriage to Miss Maxine Nichols some time ago; so far he says he has been able to keep the wolf from the door and advises the rest of us to get in line.

He took a mean fling at Tom Kelly by asking why Tom's company (The Glidden Co. of Cleveland) didn't put out a good shellac. Tom's defense will appear in the next issue, together with an important announcement.

A. C. Walker, better known as Johnnie, because of the well-known brand, is at Yale studying for his Ph.D. which he expects to receive in June, '23. We understand that Mrs. Johnnie is also studying there for an advanced degree.

Bob Van Kirk is with the du Pont Company in the dyestuffs department with headquarters at Providence, R. I. He boasts that he isn't married, so we expect to see him slip any time — pride goeth before a fall. And we have just noticed that, while his letter is on The University Club, Providence, R. I., stationery, the letter was mailed from Newton Center, Mass. Draw your own conclusions, boys.

Dick Wilkins is in charge of the chemistry department at Chauncy Hall — we suspect he took the position so he could be near the Lenox, at least that is where we saw him Christmas time. He is the proud daddy of a future Tech man of the Class of 1943, Ph.D. 1946. Mrs. Dick was Elsie Adrienne, daughter of Dr. and Mrs. John B. McGee of Cleveland.

We hear that Shorty Carr is with the Pejepsco Paper Co. of Brunswick, Maine.

Packey McFarland is with the Atlas Powder Co. near Tamaqua, Pa. He is in charge of their research work on explosion caps and kindred harmless stuff. Must be a nice life, if you like it.

Frank Travers must be travelling these days, for our letter after being forwarded several times was returned from the McNab & Harlin Manufacturing Co. with a note saying he left no forwarding address. Any one seeing Frank is requested to have him get in touch with the course secretary.

Bennie Whorf treated us to a real surprise by enclosing three pictures of Raymond Ben Whorf, born August 21, 1921. We dislike to shatter Bennie's hopes by saying that Dick Wilkins' youngest, Bill, is slightly ahead in the race for course baby, having arrived May 27, 1921. We here announce that in the next issue we wish to have a page of young hopefuls, and let the crowd decide the winner of the (imaginary) silver cup. Take it from us, Ben's exhibit is going to make them all hustle. Ben says he has him scheduled for an S.B. degree in X in 1943, if he doesn't get Millard in Theoret.

Bennie is with the Hartford Fire Insurance Co. of that city; in the early stages he says he "saw the inside of about everything from benzol stills to theatre dressing rooms" but is now in the office. We rather guess Mrs. Ben (Celia Inez Peckham) thought he was seeing too much and got him to retire from active duty. Business must be rotten when the Whorf family can take their midwinter vacation at Miami, Florida.

Johnnie Abrams (Doc Bush) got married half an hour before receiving his master's degree last June. He is now in California making a fortune in oil. — Karl Ford has resigned as instructor in quantitative at Tech to enter industrial work. — Bill Ryan is located at the Eastern Manufacturing Co., Bangor, Maine, as director of the Bangor Station of the School of Chemical Engineering Practice.

Don Burton writes in part as follows: "I have been pretty much out of intimate touch with the Institute since leaving and, though living in Hartford for the past year and a half, I have been in Boston once. If by any chance you get down Hartford way be sure and look me up. Meantime my best personal regards to yourself and any of our mutual friends whom you may meet."

Don writes from the Associated Companies in Hartford, so we assume he is in insurance. Write us more in detail next time, Don.

The following are corrected Course X addresses:

Clifford B. Bellis, Bellis Heat Treatment Co., New Haven, Conn.; George S. Brewer, 1119 Mellon Street, Pittsburgh, Pa.; Earl P. Collins, 10 Dana Street, Cambridge, Mass.; Philip M. Dinkins, care The Dorr Co., 101 Park Avenue, New York City; Stanley H. Franklin, care W. S. Finishing Co., Providence, R. I.; James C. Irwin, Jr., 5123 Blackstone Avenue, Chicago, Ill.; Joseph A. Kelley, 95 Colby Street, Haverhill, Mass.; David M. McFarland, Atlas Club, Tamaqua, Pa.; Waldo S. McGuire, Box 111, Kingston, R. I.;

William P. Ryan, M. I. T. Station, Eastern Manufacturing Co., Bangor, Me.; Max Seltzer, care Seltzer & Stewart, 8 Beacon Street, Boston, Mass.; Albert C. Walker, 411 Ellsworth Avenue, New Haven, Conn.; Richard A. Wilkins, Brandon Hall, Brookline, Mass.; Benjamin L. Whorf, 30 Webster Avenue, Hartford, Conn.; Robert W. Van Kirk, The University Club, Providence, R. I.

We are indebted to the *Transcript* for the following: "Announcement is made of the engagement of Miss Dorothea Cary, a Wellesley College girl, to Clarence Chisholm Fuller, XIV. Miss Cary, who is the daughter of Mrs. Ellen H. Cary of the faculty of Jackson College, has been, since her graduation, a physical director for three years, at Stuart Hall, Staunton, Va., and at the Knox School in Tarrytown, N. Y. Mr. Fuller is a metallurgist, at present with the Foxboro Manufacturing Company, in New York City."

And the *Salem News* for this: "At the last corporation meeting of Massachusetts Institute of Technology the resignation of Karl L. Ford, X, of this city, instructor in Chemistry, was accepted. Mr. Ford left Salem last week to fill a fellowship for the National Glass Containers' Association at the Bureau of Standards, Washington. A graduate of the Salem Training and High schools he entered Technology in 1914, and since June, 1920, has been an instructor in chemistry at the Institute. His work being brought to the attention of others he was offered the position at the Bureau of Standards. While in the high school he published an amateur society paper, always took great interest in boys' work, was a scout master and deputy commissioner of the Boy Scouts, and conducted one of the best summer camps ever held by the Salem Fraternity.

At the opening of the war he planned to enlist but was persuaded to wait a few months as later there would be a greater need of trained men. In November, 1917, he enlisted in the Naval Reserve force, was rated MM2c and after a short term on board the ship *Commonwealth* during which time he did the usual duties of a gob, coaling ship, scraping sides, etc., he was transferred to Pelham Bay station and assigned to construction work on hospitals. Slated for this work overseas, he was preparing to sail when orders came to report at the experimental station at New London. Here he assisted in the experiments being conducted on the apparatus which afterwards proved of so much benefit to the work of the navy. On completing the special work given him he was put in charge of a crew and then ordered to turn them over to the commanding officer at Hoboken. He was then sent to the officers' material school at Pelham Bay, rated C. P. O., and during his studies served on board tug boats in New York harbor and made a trip to the Virgin Islands on board the *Kittery*, an old German boat.

Graduated from Stevens, an ensign in the engineering branch, he was ordered to report to officer in charge of Overseas Transport Service at New York. While waiting for his ship to dock he was transferred to Norfolk, assigned as assistant engineer on a supply boat, where he remained until his release from active service. Released from active duty in August, 1919, he reentered Technology to complete his studies, graduating in the Class of 1918 in common with his classmates who left the Institute to enter the service.

Immediately offered a position as chemistry instructor he began his duties at the summer school June, 1920. At the close of the regular term in 1921, he was offered a position with a Western firm for analytical work on brass, but preferred to continue his work at the Institute, where he remained until the present time.

The offer from the Bureau of Standards came some time ago and on the advice of some members of the faculty he accepted it, remaining at Technology to complete the first term of 1922, as his work was considered very helpful to the students with whom he was a favorite.

On the discharge of members of the Naval Reserve, for lack of funds, he was transferred at his request to class 6, without pay, and ordered to report to the commanding officer of first naval district as ensign engineering branch."

Nel Bond is reporting Course XI and writes as follows: "*Dear Julie:* I wrote to the boys whose addresses you sent and have heard from five of them. Starr said that he had written you telling you that he was at home and not doing much except looking for a position. He is a good man and I hope he lands something soon. Ralph Bushee is working in the engineering office of the sanitary district of Chicago. Dawson is in the same office with Bushee. Warren Scott and Laurence Gillett are with the Massachusetts Department of Public Health. — Frank Dillon is back at the Institute in Course II. He

told me not to get anything in the REVIEW about him. I guess he wants to be affiliated with the Class he is with now. The rest of the boys I have not heard from as yet, but if I get more news I will send it along. None of the boys seem to be married as yet and do not tell me of any startling bits of news. I am in the grocery and grain business just at present. As yet I have not made much use of my engineering training, but am not settled in anything permanent, although I ought to be."

C. W. Dow reports J. H. Sullivan is just on the point of leaving the navy.

Jack Braislin was selected to represent Course XIII, but to date we have not been able to locate him. Any one knowing of his whereabouts, please inform the assistant secretary.

George Murray is with the Scillograph Engineering Co., as is Pete Strang, XV. Pete is selling and doing engineering work in the new company turning out self-lubricating bearings. Says he is not in the matrimonial bureau.

Clarence Bassett is reporting Course XV and writes as follows: "Tom Fogarty is with Cobb & Drew, Inc., Plymouth, Mass., learning the intricacies connected with the manufacture of rivets, burrs, tacks and staples. Plymouth is Tom's home town and from the letters he writes he gives one the impression that 'The old home town is good enough for me.' He adds the information that Donald D. Warner is in Rochester, N. Y., working for the Shur-On Glasses company.

G. R. White writes that he is happy in the Life Insurance business as a special agent with the Equitable Life Assurance Society of New York. His office is in the Old South Building, Room 1034, Boston, Mass. Is engaged and is to be married soon.

Charles J. Nangle has recently married and is selling for the Worthington Pump and Machinery Corporation.

J. Tillon (Vic) Sattels has been in Providence, R. I., for the past year with the Electrical Production Manufacturing Co. Address 'The Brenton,' 210 Waterman Street, Providence, R. I.

From Waterbury, Conn., comes the following bit of news from Thomas V. Brosnahan. 'I have been in Waterbury for more than three years and spent the first seven months doing research work in industrial fatigue for the United States Public Health Service. Since then I have been with the Scovill Manufacturing Co.'

Walter C. Wilson is now vice-president of the E. A. Wilson Company, Lowell, Mass. He recently resigned from the United States Navy, where for the past four years he was aeronautical engineer and test pilot at the Navy Department, Washington, D. C.

Carl Blanchard writes that he joined the rapidly increasing army of married men last September. At present he is tidewater agent of the Wyatt Coal Sales Company and Newport news agent of Willard Sutherland & Company with offices at Newport News, Va."

Harold E. Collins writes in a newsy letter: "Your letter of the twelfth received tonight and I am doing my best to live up to your request in writing at once. As regards the other fellows, I know little about them as I have been out of touch with the world in general for the last ten months. I rode in on the train from Wellesley the other night with Albert Clarkson, brother to John Clarkson, and he tells me that Johnnie is planning on wading into the sea of matrimony on or about June 1, 1922. John has about three months on me, for I am planning the same leap some time this fall if all goes well. That's why I was out to Wellesley. I saw Julie Leonard on the street about Christmas time and he was lamenting his fate, as he claimed he couldn't find a girl. I'm kind of skeptical about Julie, but you might insert an ad for his benefit in the Class column. Perhaps some of the brethren has an eligible sister.

Regarding work, well Clarence, I've just started out on a new track. March 1, I left the Barrett Company, Everett, Mass. and took up laboring for Rogers, Brown & Co., 53 State Street, Boston. If any of the boys buy pig iron or coke for their foundries or manufacturing plants we are there to supply their demands — f.o.b. somewhere. That's all the news I know except Larry Marshall announced his engagement to a girl in Somerville and I believe he is stepping off this spring. I'll get hell if these fellows find out I told you and they are keeping it dark, but what's the sense of keeping it dark? Best luck for lots of news, and let's hear from you once in a while aside from news getting."

Johnnie Clarkson writes as follows: "Dear Bass: Was very glad to hear from you and I am endeavoring to carry out a resolution of speedy dispatch in all matters, hence this letter in such a hurry. As for myself, I am out of a job, that is, will be by tonight. The

concern which I am with, is a poor bet and is going out of business. What I will do, I don't know. I am doing a little rushing around but can't find what I want.

Gardner Johnson is still located in New York City. Mail addressed either Danvers, Mass., his home, or to the Tech Club in New York City would probably reach him.

I do wish that a decided effort could be made to get some real news of 1918 and I think a meeting of two or three men located in Boston could probably accomplish the purpose. I would willingly give some time if anything might develop. Would you communicate my intentions to one J. Howe? Perhaps something would result.

Am not married. Had planned to be in June, but just now I guess my fondest hopes have gone glimmering. Mighty glad you wrote. If you know of anybody looking for a good man, let me know."

Gretchen A. Palmer, V, writes in a very newsy letter. She says in part: "I came to the Smoky City the latter part of July, 1918 and for over two years worked in the office of Morris Knowles, Inc. I had complete charge of the laboratory during my stay with them. This firm is mainly M. I. T. men and while I worked there at one time there were fifteen of us there representing at least ten classes from the State.

A year ago last November I left them and became assistant to J. E. Rush, '12, who is a professor at Carnegie Institute of Technology. Although I was with him as his private assistant I did much school work for him. I stayed here until January 1 of this year, when I left my profession altogether and branched out into an entirely different field.

January 1, I became rector's assistant at one of the large Episcopal Churches here in the city. I am handling most of the young people's activities and church secretary work. So far I enjoy it immensely. I really have not been at it long enough to say much about it."

Miss Palmer reports the following engagements and marriage notes: "Charlie Don, V, engaged to Miss Dorothy Redfield. — George H. Richards, V, unknown. — D. W. McArdle, V, to Miss Ruth Willey of Wakefield.

Wendell H. Kayser and wife (Miss Lida Ellen Nichols of San Diego, Cal.) live in Endicott, N. Y., employed in International Time Recorder Co. — Lawrence Kayser born October 25.

Mr. and Mrs. J. B. Woodward still living in Newark, N. J. Both Course IV. Mrs. Woodward was formerly Miss Boudy Lemp. — Miss Sibyl Walker, III, married to H. H. McClintic, '19, last June, residing in Pittsburgh. L. H. Flett, V, married."

In conclusion let me state that I am very much pleased with the response the course secretaries as well as the fellows themselves have made, and it only goes to prove that a little coöperation will go a long way toward putting the 1918 news notes where it belongs. Next time lets hear from each course and have each secretary strive to put his course on the map. Competition is always healthy in anything of this sort, so "let's go."

1919

E. R. SMOLEY, *Secretary*, 55 Hanson Place, Brooklyn, N. Y.

P. D. SHEELINE, *Assistant Secretary*, 55 Magazine Street, Cambridge

Here it is April, 1922! Some of us will be thinking of spring as the time when our fancy flies in certain directions, some will be thinking of the pleasant days we will spend on the links and courts, in nature's woods and country, others will be thinking in a business way with satisfaction of the beginning of the unclouding of the industrial depression; at any rate, all of us should be thinking — more optimistically. I am taking this special opportunity to talk things over with you. First, I am giving you a statement of our finances to date. It is our purpose as a permanent organization of the Class of 1919 to build up a fund which it will be necessary for us to have for future occasions. This fund will be used for purposes such as keeping Class records, mailing expenses, etc., for organizing Class reunions, etc., for working up any permanent record of the Class, for memorials or contributions of the Class at large, and for any emergency or other expenditures. With this in mind, I do not hesitate to state that it is up to the Class at large to build up this fund. As you know, our assistant secretary recently circularized the Class for the dues for 1922. The results are in the financial report given below. Only

seventy-five men sent in money in response to this request. Several members of the Class felt that on account of the industrial depression they would postpone their payment for the present, others were handicapped due to business causes or to having recently launched into the seas of matrimony. However, there are a large number who for no reason whatever have not remained true to the 1919 standard. The dues are still being received at the above addresses, and it is up to every one in the Class to come across and to place himself on the live wire end of 1919.

Send in the Class dues.

Second. Stop for one moment and reflect on the purpose of these notes. Don't you like to read of the whereabouts and whatabouts of your fellow classmen? These notes are yours. You ought to treat it as a fifty-fifty proposition and get your share into them. We ought to hear from every one in the Class once a year, and the least you can do with a clear conscience is to write in that often, telling us about yourself and any other 1919 men you have come in contact with.

Send in Class notes.

Third. Occasionally we hear from men in the Class who say they haven't received a single word from us for several years, and who are wondering whether it (the Class of 1919) has died a natural death or tripped in the dark. There is one way to receive all Class notices and that is to keep us informed of any changes in address, so that mail will not have to travel all over the country and finally end up in a dead letter office for want of proper address.

Send in change of address.

Fourth. A large percentage of our requests for information, notes, etc., sometimes where we even enclose return postage, are not acknowledged. We are not conducting this work for any personal gain, and we feel that every request from 1919 or Technology warrants a reply from you. You owe it to them.

Acknowledge all 1919 mail.

In closing, and before we go to the news notes, I want to thank those of the Class who have so far supported the column and the spirit of 1919 as well as they have and with a request to the rest of the Class to pull together. — E. R. SMOLEY, *Class Secretary*.

Remarks and notes from P. D. Sheeline: "*Dear Gene*: Received your letter yesterday, so am hurrying to answer. Unfortunately have been at home sick in bed for the last three weeks and, although I tried, just couldn't get to the statistics work. Today I spent on it and managed to do some of it, but it isn't nearly as elaborate or as nice a job as I had intended. Sorry, old man, but I've felt so rotten I just couldn't do it. Am enclosing a brief treasurer's report to date (as of March 9), also a letter from Art Kenison describing the 1919 dinner, which I started in to arrange for, but couldn't finish the job — so Art did the work for me. Hope this stuff reaches you in time. As ever, *Paul*."

The statistics which follow were compiled from the answers to card questionnaires sent out several months ago to all members of the Class of 1919. Unfortunately although five hundred cards were mailed only ninety-one answers have been received to date and these statistics are based upon this material which may be taken as a fairly accurate Class average. Replies were received from Maine to California; from Alaska to Brazil; from Sweden to Austria and from South Africa to Hongkong. So here goes:

Based on 91 replies

Average initial salary upon leaving Institute, \$1,348.

Average initial salary upon leaving Institute omitting three lowest and two highest ratings, \$1,348.

Salaries, lowest, \$360; next lowest, \$780; highest, \$2,520; next highest, \$2,200.

Average present salary, \$2,180.

Average present salary omitting two lowest and two highest ratings, \$2,080.

Lowest, \$1,040; next lowest, \$1,175; highest, \$10,000; next highest, \$5,000.

CLASS RELIGION

Protestant	66
None	8
Catholic (Roman)	5
Jewish	4
Christian Science	4
Disciples of Christ	1

Non-Sectarian	1
Undecided	1
Free Thinker	1

CLASS POLITICS

	Number	Per Cent
Republican	56	61
Democrat	6	7
Independent	4	4
Independent Republican	1	1
Socialist	1	1
(Canadian) Conservative	1	1
Undeclared	22	24
	<hr/> 91	<hr/> 100 per cent

Masons (Masonic Bodies)	19
I. O. O. F.	4
B. P. O. E. (Elks)	4
Undeclared	44
None	10

Annual Banquet, January: L. B. Smith, R. M. Blood, H. Rommer, P. D. Ames E. H. Shurman, R. S. Palmer, K. S. Nutter, A. C. Kenison, R. M. Leland, Paul Swasey, M. S. Noyes, E. D. May and P. D. Sheeline. Although few in numbers, we all had a good time. Red paper overseas caps were ready for all 1919 men and we looked quite distinctive among the more somber graduates.

From Art Kenison, 97 Milk Street, Boston, Mass.: "*Dear Paul:* This is just a brief write-up of the 'dinner' last month and the 'supper' this past Tuesday evening. The 1919 Class dinner was held on February 28 at Louis' Cafe. There were thirteen of the faithful who responded and consisted of the following: Richard Cashin, Jr., Jesse Stam, Henry Whiton, Bob Hackett, Leon Snow, Morris Berkowitz, Roderick Blood, Ervin Kenison, Russell Palmer, Roger Leland, Bill Leahy, Art Griffin and A. C. Kenison. Our Class secretary, Paul Sheeline, was forced to be absent on account of illness and was badly missed, as he is usually the 'life of the party.' The dinner was excellent and was followed by songs and Tech Show stuff rendered by Ed Smitz assisted by Rogers at the piano. After that we were favored with an exhibition bout between Phillips and Ryan of the Tech Boxing team, staged by Eaton, the assistant manager. The remainder of the evening was spent in songs and reminiscences with Bill Leahy tickling the ivories. At this meeting it was decided that all the Tech men in this vicinity should plan to drop into Louis' for supper on the first Tuesday of every month so that there will be a regular time and place where a fellow will be sure of meeting the other members of his Class who are around Boston.

The first of the Tuesday night suppers was held on the seventh of March and although it was a very poor night in point of weather, we had seven men who dropped in at Louis' shortly after six P.M. and took supper together. They were: Russ Palmer, Ervin Kenison, Eddie Pierce, Max Untersee, George Wiswall, Max Knobel and A. C. Kenison. Every one was strong for the monthly supper stunt and we are all pushing now for the next one which will be on the fourth of April as it is the first Tuesday of the next month.

I guess that's about all the dope at present, Paul, but if there are any other details which you want just give me a call. Sincerely, *Art Kenison.*"

1919'ers who get to Boston will want to know about the

TWELVE, 1919 SUPPERS

<i>Place:</i>	Louis' Cafe, rear of Tremont Theatre.
<i>When:</i>	First Tuesday of each month.
<i>Time:</i>	Six to seven P.M.
<i>Why:</i>	Good fellows stick together!

NEW YORK DINNER

On the twenty-eighth of January a group of 1919 men of the vicinity of New York City dined and talked things over at the Technology Club. Although the real blizzard of the winter was in full swing that night the following managed to get there: Oscar Mayer, Otto Muller, Charlie Parsons, Albert Reynolds, Arnold B. Staubach, T. M. Lloyd, E. R. Smoley, F. J. Rasmussen, T. E. Shea and L. H. A. Weaver. A number of men sent in their regrets, among which are the following: A. H. Blake, G. R. Bond, Jr., R. L. Burbank, J. S. Caldwell, B. S. Coleman, A. R. Ford, L. J. Goldstein, F. L. Hunter, Roger B. Johnson, Leo A. Kelley, Dave Sanford, Ark Richards, Chuck Drew, Don Way.

The following names and addresses are apparently incorrect as mail has been returned. We would appreciate any news as to their whereabouts: C. J. Barrios, care A. L. Moreno, 50 Broad Street, New York City; R. H. Bartlett, 2995 North Congress Road, Yorkship Village, Camden, N. J.; H. W. Best, 235 West 71st Street, New York City; L. J. Brown, 121 Dale Street, Roxbury, Mass.; W. J. Farrisee, 817 Somerville Avenue, Cambridge, Mass.; V. T. Givotovsky, 1324 St. Nichols Avenue, New York City; R. E. Goddard, 78 State Street, Hackensack, N. J.; R. P. Hackett, 25 Parkhurst Street, Newark, N. J.; Shao Yu Hung, 421 East 118th Street, New York City; A. G. Richards, care National Aniline and Chemistry Company, Brooklyn, N. Y.; H. Wallerstein, 825 Seventh Avenue, New York City.

STATEMENT OF CLASS FUND

Closed March, 1922

Receipts:

Received from Institute Committee, June 10, 1919	\$100.00
Dues paid, 75 at \$3.00	225.00
Received from Institute Committee	200.00
From Class Fund	27.59
Interest	6.68

\$559.27*Expenditures:*

Printing and mailing notices, stationary, Class file and records	\$108.04
Deficit on Class banquet June 21, 1920	35.19

\$143.23

Balance on hand

\$416.04

Respectfully submitted,
E. R. SMOLEY, *Treasurer.*

J. Braverman, 124 Elizabeth Avenue, Newark, N. J., home address 5 East 98th Street, New York city, telephone Lenox 203, wrote in as follows: "*Dear Mr. Smoley:* I worked two years in dry color industry and at present am a treasurer in this corporation (West Side Chemical Charcoal Co., Inc.). In July am starting a dry color plant in Newark, which business I am at present organizing. I suppose you know that I was only one year at M. I. T. where I got a \$50 scholarship. I was forced to transfer to Carnegie Institute of Technology, Pittsburgh and have from there a B.S. in Chemical Engineering. I am a member of the Technology Club of New York at 17 Gramercy Park. Sincerely, J. Braverman."

A card was received from Benjamin H. Bristol, 2d, Foxboro, Mass., business address care The Foxboro Co., assistant superintendent of company. "Not married. Better late than never, I hope. After I got out of the service started working for the Foxboro Co. making industrial instruments and have kept at it ever since. If it wasn't for the fact that I live fairly near Boston I guess I would have been fossilized long ago. Mitchell, Course II, has been working for the Foxboro State Hospital for a few weeks. B. H. B."

The following letter came from Bernard S. Coleman, Box 208, Little Falls, N. J., March 8, 1922: "*My dear Smoley:* Where, oh where was 1919 at the recent Tech Club of New York dinner? Only three or four of us, Ye Gods! We almost won the prize for the smallest number present. Sorry I couldn't get around to the last run-off at the Club, but old friend grippe had me by the ears and my dinner consisted of crackers and milk. Had counted on getting around, but the fates were agin' me. In the next REVIEW why

not give us a summary of the 1919 men engaged, married, etc., *ad infinitum*? I think some such list would be welcome. (Don't ask about me; I'll be surprising you all some of these fine days.) What's happened to the Rt. Hon. Charlie Parsons? Has he dropped through the earth, or is he still with us — never any news about him in the Class notes. Next time guess I'll look in 'Who's Who' for his name. Regards to the gang. Sincerely, *Bernard S. Coleman.*"

Blake Darling, Hartford Erie Insurance Co., Hartford, Conn., wrote in March 12, 1922: "*Dear Smoley*: Your post card addressed to an ancient address of mine reached me recently. It was the first notice that I have received from the Class of 1919 and I really thought that the organization must have died a natural death. I certainly would like to hear what has become of some of my old friends. Do you ever hear from Bolan, Hall, Flynn or Stuart and what are you doing yourself? I have been in the engineering department of this company for the past year and a half and would be glad to see you if you ever come to Hartford. Yours sincerely, *Blake Darling.*"

I am glad that we finally got word from you after a silence of three or four years and I hope you keep up the good work! May we suggest that the 1919 column of the REVIEW notes carries all news of the Class and is very much alive!

News of Oscar deL. Mayer reached us from his brother: "*Dear Mr. Smoley*: Sorry to tell you my brother can't answer your request, just received. He is on a vacation at La Manuelita, near Cali, Colombia. You probably can't reach him by mail. Yours, *E. deL. Mayer.*"

And a card from Oscar dated February 18 says: "Just a point of call. Still have two weeks of traveling before I get into the Cauca Valley. A peach of a country and just cool enough to make life possible. *Oscar.*"

G. G. Fleming, G. & J. Tire Company, Indianapolis, Indiana, wrote in March 13, 1922: "*Dear Gene*: Your postal arrived with request for personal information. However, on reading over the last issue of the REVIEW, I noticed that my good friend Charlie Locke had liberally transmitted information to you and some of it looked damned funny in print. The next time I will learn not to be so chummy with the faculty. News I have little, being somewhat dead above the ears, even more so than in Palmerton and you know I was bad enough there. I am connected with the above outfit, though I am not a very important member of said outfit. However, I have learned to look wise as hell and keep my mug shut and so far have not been fired. I might mention that Indianapolis is a fair town, though somewhat monotonous, though if one has time, inclination and especially a little cash, the prospects are fair enough. However I have neither cash nor inclination and so lead a very sedate life, even more so than in the Valley of Zinc, Steel, Coal and Dutch ankles.

Jimmy Reis writes from Pasadena, California where he is spending the winter but as usual says nothing. George Mac has not favored me with much news from Palmerton, though I gathered that the other shining Tech 'lights' are still drawing pay, such as it is. I gather that the matrimonial fever still hovers over Uncle Edgar's village and I shudder with the thought that Doc, Burby, and Mac are still exposed, though show little signs of catching the fatal germ. However one must give the boys time.

The Tech crowd here is not very lively, though hold dinners once a month. The doors are not bent in with any rush of a hungry mob and so far no extreme youngsters like myself have hove into sight. Sorry that I can't burst forth with wit like some of my former friends, but at least I have heeded the call. Let me hear how the world treats you. Do you still inhabit 160 Front Street and is the village as attractive as ever? Remember me to Don Way should you see him. Is Oscar Mayer building ice plants? The last time I saw him, he was going to leave for the land of the dark-eyed Spanish beauties. I often wondered was his ice plant personal equipment to lower temperature. I understand such an outfit comes in handy on moonlight nights below the Equator. *G. G. Fleming.*"

Daniel C. Hall, Capron, Va., February 1, 1922, sent in a letter, which follows: "*Dear Gene*: Since leaving the N. J. Z. Co. at Palmerton, Penn., due to the industrial depression, I have had a multitude of experiences. First, I worked as a chemist for the Eastern Metal and Refining Co. at Malden, Mass., this work being mainly devoted to tin ores and products. Leaving there in April, 1921, I went to work for the National Lime Association, stationed at the Bureau of Standards, Washington, D. C., where I conducted a research on the 'quick-setting' of lime plaster. My next adventure was into the realms

of matrimony, the knot being tied September 2, at Arlington, Mass., with the help of Miss May E. Patterson. My latest escapade is that of principal of Capron High School, Capron, Va., which is good till June. What next? I thought you might like these facts for the TECHNOLOGY REVIEW. Yours truly, *Dan.*"

News has come in from Lieut. F. R. Hewes, C. E. C. U. S. N., Kitsap Inn, Bremerton, Washington, February 16, 1922: "*My dear Smoley*: To escape the ignomy, dear secretary, of being relegated to your list of dead members of our celebrated Class, I have the honor of submitting the following. After recovering from the shock of receiving a degree back in September of '18, Roger Hall, '19, and I enlisted in the C. A. C. and were assigned to the Coast Defenses of Boston at Fort Wanan. In the normal course of events we reached the O. T. C. at Fort Monroe, Va., just about in time to celebrate the armistice. For the following year and a half I detailed, estimated and designed steel work for the Bethlehem Steel Bridge Corporation. Tiring of the menu in my Pennsylvania Dutch boarding house, and despairing of acquiring much of the Schwab millions, I accepted a position with the Engineering Division of the Air Service at McCook Field, Dayton, in the far-famed 'Post-graduate school in structural design of M. I. T.' After a year and a half of airplane design, I took the exams for admission to the Civil Engineer Corps of the navy and entered the service last September with the rank of lieutenant (j. g.). My job is superintendent of the public works of the navy in the 13th Naval District outside of the Navy Yard, Puget Sound, and includes Alaska. If our friends in Congress fail to make good their threat to materially reduce the navy, I will have a chance to see Alaska this summer. Otherwise, I will undoubtedly have another opportunity to work for a living again. At present my ambition is to qualify as a golf instructor, but my best efforts over a nine-hole course look like a fairly creditable eighteen-hole score. Neither married nor divorced. Yours sincerely, *Fred Hewes.*"

W. A. Maynard, 1632 University Avenue, New York City sent a card: "*Dear Gene*: Just arrived from the South, so of course had to miss January 28 get-together. Sorry. Keep me informed please of future events."

George Michelson, 72 Greenwood Street, Dorchester, Mass., business address 87 Milk Street, Boston, Mass., engineer with Underwriters' Laboratories, wrote in: "I received my degree from the 'stute' in 1918 and went into the intensive naval art course. The armistice stopped that. I became connected with the Underwriters' Laboratories and spent two years in charge of the Hartford, Conn., office. During that period I covered the entire country. Since May 1 I have been back in Boston with the same people."

The following letter is from Joseph S. Newell, 823 North Main Street, Dayton, Ohio, January 25, 1922: "*Dear Smoley*: I don't know whether or not you give a damn, but I've changed my address twice since I filled out 1919's questionnaire last October. Firstly I went to Carbondale, Illinois, and during such of my time as was not occupied by the work of the Division of Highways I 'belly-ached' with the rest of the gang concerning the life in that part of 'Egypt.' So the less said about it the better. I started off the New Year with a new job at McCook Field, it entailing the august and dignified title of Aeronautical structural engineer. I know it carries a lot of dignity because 'Dinny' Hewes went by the name of Fred while he was here. He left last fall to become a civil engineer in the navy and he's out West somewhere now. My immediate boss is one Niles whom members of 19's Class in Structures will doubtless remember.

They have quite an active Tech Club in this city and one of the points that is being discussed at present is the advisability of having the Alumni Association establish a sort of a board of lectureship, said board to furnish speakers to the various Tech clubs throughout the country. The purpose of such speakers would be twofold: First to acquaint the alumni with what is happening back in Cambridge, and second to get the ideas of the alumni on various matters that they like to think they know something about. Some of the ideas would doubtless be worth while, and in any case such a move would tend to bring the alumni into closer contact with the problems of the Institute, thereby making us feel less like members of an organization that knows practically nothing about its reason for existing. And where is there a man who hasn't been in Boston for five years who has more than a hazy notion as to what is being done at the 'stute' this year, or what its immediate needs are?

If you think the plan to establish such a corps has any merit whatsoever, why not canvass that part of our Class that is living away from Boston and so is probably interested

in Tech clubs and alumni affairs? If each '19 man who is affiliated with a Tech club in any city in the States should put such a proposition up to his club and live up to his responsibility to report on whether it met with favor or not we could soon say that '19 put something over to keep the alumni organized, interested and working for Tech's interest. Think it over, and if it appears to be worth while, why get out your old Waterman and go after some of the men who made you secretary and let's see if we can put it across as a '19 affair. Meanwhile, I am, Yours sincerely."

Lansing Mott Quick, 71 Grove Street, Stamford, Conn., wrote in: "*Dear Gene:* Sure was glad to get your Christmas card, because it let me know where you are. Of course you didn't get my card. Cause why? I didn't send any. I sure am a heller on forgetting people. Nevertheless I'll drop you a line now and try to make up for it. I suppose you are wondering what I am doing up here. Well, I'll tell you the story. After coming east from Pittsburgh about a year ago, I went in a rapidly dying hardware store at home and worked like hell to pull it back on its feet. After four months, by mutual consent, I left and loafed for four months. Along in November I got a chance to come up here as salesman for a local mason supply house. Of course it is a little out of my line, but I took it as my exchequer was rapidly approaching the vanishing point. I am not exactly at home in the job yet, but things are becoming more and more familiar to me. Of course building is not at a fever heat now, but I expect better results in the spring. There is one other dealer in town and as competition is very keen it has settled down to a price-shaving war between us. *Speed.*"

We received the following letter from Mason S. Noyes, XIII, 94 Dean Street, Taunton, Mass., March 14, 1922: "*Dear Smoley:* Replying to yours of the seventh, admit I owe the Class something, for although I was able to be present at the alumni banquet in January, I was not free to go to the Class dinner in Boston on the twenty-eighth of February. I owe Paul Sheeline an apology for not answering his notice, but the date had come and gone before I realized it. All that I can say regarding myself is that I am again doing something. At the time of the banquet I was doing nothing, but was about to enter the life insurance business with the same people as has Kenison. However, there came a chance to get into yacht and motor-boat building plus designing on the side — all right here at home — so here I am. Business looks good and I am out to make it look better.

There are two more local '19's who have not reported yet, I think, and in case you do not hear now from them, I'll pass the gossip along. Bob Mitchell, II, and Albert Schefer, I, are working for Heyward, the local surveyor, at Grafton, Mass., making a topographical survey of a State Farm of several hundred acres. They immensely enjoyed (?) some very cold days during the last two months. Edmund (Doc) Flynn is, as far as I know, still in Palmerton, Pa. Probably you know better than I. He did not get home for Christmas to my regret and so I am glad of a little glimpse I had of the old dear last fall. Don't know whether you'll also hear from my chum, Dusty Rhodes. The last I knew he was about to take up bond selling in lil' ol' N' Yawk. Hope to have a little boat of my own this summer, just so I can run about on the river. If I do, Taunton River can boast of another 'bony herring'! Best of luck and hoping this hasty note will be in time for April, I am, Yours for 1924."

We all understand that 1924 is the year we celebrate our fifth-year anniversary.

Albert B. Reynolds writes that K. F. Rodgers, Course II, is now at the Western Electric Company, 463 West Street, New York City.

Chester C. Stewart writes that he has just opened up an office of Seltzer & Stewart at 8 Beacon Street, Boston, Mass., sales engineers: "As you can see, we at least have the letterheads and envelopes to go with them; but there is really more to the organization than stationery and a place to park, for we are now seeing light and can frankly say that our efforts have not been in vain and we are in to stick. Our real aim to establish a consulting business, but it is obvious that that will take time and in order to carry the load and equalize it in dull times we have resorted to handling a well-known line of safety equipment that is certainly a good seller and a good means of obtaining entrees for heavier things in the future. The tubular mask is finding wide use in the chemical industry and is displacing all similar equipment in both petroleum and gas practice. As you can readily see, it is very adaptable to work in toxic atmospheres, such as light oil, acid, etc., tanks, in fact under any conditions where the fresh air is not too distant. We have been on the trail of two or three consulting opportunities that are still hanging fire; fortunately we have

the coöperation of a well-known consulting firm here so that nothing is too big to handle. Yours, *Chet.*"

Word reached me the latter part of January from Jimmy Reis. He tells me that he is on a leave of absence on account of sickness and is at present located at 3 Alexandria Court, Los Robles Avenue, Pasadena, Cal. Part of his letter follows: "George Fleming is getting a try-out for the J. & C. Tire Co. at Minneapolis. I have not heard how he is making out, except that he was sent to Detroit to learn the fundamentals before taking up the work. Give my regards to all the boys that you round up for your gathering and let us hear all the latest news from the Class. If there are any stray members of the Class out in this part of the country, I would be glad to look them up and get all the latest dope on them for you. As ever, *Jimmy.*"

Here's hoping that you are enjoying your vacation and that you will soon be on your feet again. Gene.

Don Van has been covering the country pretty thoroughly during the past few months having been from St. John, Quebec, Canada and Trumann, Arkansas to the Pine Country in Louisiana.

If you want some news about the fellows, read the following letter from Maurice E. Goodridge, 463 Lebanon Street, Melrose, Mass., March 19, 1922. "*Dear Gene:* On March 7 you said 'do it now' and we all knew you were kidding and really meant 'in the near future' so here it is. Of course I am so busy these days that I — What say? — All right then, I'll trim it down. I am still with the Northeastern College School of Engineering teaching math and physics to freshmen, and banking and investments to juniors. (Imagine that! you know how we used to hit banking back with — well, I am learning it now anyway.) Of course that doesn't take much of my time, so I put in the rest with the engineering practice department, visiting the firms where the boys are putting in their work periods, or where we want them to. I cannot say that I am really crazy about teaching, but I might be persuaded to continue if I can't get anything better.

E. F. Perkins, X, is also at Northeastern teaching "chem" to upper classes. He went to South Bend for a year, presumably to work, but got married instead and came back to Boston last fall to teach. Of course I see Arthur Kenison, VI, occasionally, for as a life insurance salesman he knows us all. I dropped in at the American Telephone Company the other day and found Ervin Kenison, XV. He is planning the future of the Company and figuring traffic centers and costs. Lou Goldstein, XV, dropped into Boston for last week-end and actually allowed me to eat with him on Monday noon. He claims the Hartford Tire and Rubber are still making tires although he has been with them for more than three years, but complains at no raise since last November. Ed Pierce, II, believes he is getting acquainted in his new line with the Hoffman Specialty Co., but admits selling is pretty tough just now. I gather that the only girl is saving most of her evenings for him now, so he is not downhearted, though he claims there is no engagement. John Carter II, still with the Boston Rubber Shoe Co., seems to be still alive, but since he got married I guess he doesn't do much kicking. I haven't talked to Bunny Reynolds, X, for some time, but have seen him apparently hurrying to keep a date with an office chair, so guess he still receives his weekly pittance from the B. R. S. Co. also. Saw Harry Jewett in Melrose a week ago on the occasion of the party announcing his engagement. He covers parts of New York State and Pennsylvania selling machine tools. I have received no death notices of Walt Hall, X, or Ev Doten, II, but haven't received replies from my letters to them either. The letters were not returned, so I have hopes that I may yet hear from them in this life. Well, if you have followed through this far, I will just ask 'How the 'ell are you?' and call it a letter. My regards and best wishes to yourself and any of the boys you may see. Azever."

The following engagement is announced of Miss Alice Louise Wright to Mr. Harry Parker Jewett. "On last Saturday evening, March 11, Miss Alice Louise Wright, of 37 Garfield Road, entertained a number of her intimate friends. After an enjoyable hour of music and dancing, refreshments were served when, in a most unique fashion, Miss Wright's engagement to Mr. Harry Parker Jewett was announced. Miss Wright is the daughter of Mr. and Mrs. Herbert E. Wright and a graduate of Simmons College, 1919. Mr. Jewett is the son of Mr. and Mrs. Frank J. Jewett of Brooklyn, N. Y. The wedding will take place in the early fall."

We take pleasure in announcing that Arthur C. Kenison has this day become an associate member of this organization. Mr. Kenison's success in the insurance field has been extremely gratifying and it is with the great satisfaction that we extend the facilities of this organization, in which we believe you will find his aggressiveness, sincerity and loyalty may be availed of to the greatest possible degree.—MOORE & SUMMERS, *General Agents*.

The following announcements are late but important: On November 23, 1921, the *Boston Globe* announced "Miss Beatrice Nathanson, daughter of Mr. and Mrs. L. N. Nathanson of 118 Elm Hill Avenue, Roxbury, and Henry Bernard Blumberg, son of Mr. and Mrs. Max Blumberg of 64 Brunswick Street, were married last night in the Moreland Street Synagogue by Rev. Dr. H. H. Rubenovitz. The bridesmaid was Miss Frances Marget and Samuel de Groot of Roxbury was the best man. The wedding dinner and reception took place at Hotel Somerset, where the bridal couple was assisted in greeting guests by the parents and relatives. The bride is a graduate of the Boston Normal School and was a teacher in the Shurtleff School, Chelsea. The groom is a graduate of the Massachusetts Institute of Technology, and is an electrical engineer. After a wedding tour in the South, Mr. and Mrs. Blumberg will reside at 14 University Road, Brookline."

Boston Herald, December 25, 1921: "Richard H. Coombs, health officer at Berlin, the son of Mrs. Adelaide B. Coombs of Waltham, Mass., and Miss Mildred Lauder, daughter of Mr. and Mrs. George B. Lauder of this city, were married here this afternoon at St. Paul's Episcopal Church. Bishop Edward M. Barker performed the ceremony, assisted by the Rev. W. Stanley Emery. Miss Dorothy Lauder was maid of honor, and Earl R. Pickett, was the best man. He was formerly a classmate of the groom at the Massachusetts Institute of Technology. The bride is a graduate of Wellesley College, '18, and also took short courses at Columbia University. The groom is a Tech, '19, graduate."

Boston Transcript, December 28, 1921: "Mr. and Mrs. Archie Wilson Campbell of West Roxbury announce the engagement of their daughter, Miss Elizabeth Adelaide Campbell, to Alan Henderson McIntosh of West Roxbury. Miss Campbell is a graduate of Vassar in the Class of 1919. Mr. McIntosh is a Massachusetts Institute of Technology man, Class of 1919, and a member of the Phi Gamma Delta fraternity."

The following was received from Don Way: "I was very sorry to miss the 1919 dinner at the Tech Club in January, but as long as I keep hopping around the country so much I am afraid my acquaintance with the New York gang will be gained only through the REVIEW. Leaving New York in the middle of January, I had a wonderful trip through Arkansas, Louisiana, Texas, and Mississippi. The original purpose of the trip was to inspect a number of sawmills and large lumber operations, but at the same time there was plenty of opportunity of becoming acquainted with the sort of people who hail from these states. As far as I can see there is very little essential difference to be found between the citizens of the Eastern States and the people who live in the Southwest. Very few of the lumber people employ engineers, at least they are not located at the plants, and among those companies that were visited I did not meet any Technology men. This is probably due to the fact that labor around a sawmill is cheap, and once the machinery, which is more rugged than refined, is installed, there is no further need of a technical man. A letter from Herb Best, who left here last September with George Beeche, and Alec Halberstadt, '17, for Santiago, Chile, has just been received. These three are in the tire business and from the tone of Herb's letter seem to be satisfied. In case any 1919 men care to write to Herb or George, their address is Beeche, Best & Halberstadt, Delicias, 1437, Santiago, Chile. In a few weeks I expect to go down to a plant of the company's in Arkansas and will certainly be glad to hear from you or any other of the 1919 crowd. Address me at the Poinsett Lumber and Manufacturing Co., Trumann, Ark."

CHANGES OF ADDRESS

A. H. Blake, 7 Spencer Place, Brooklyn, N. Y.; G. R. Bond, Jr., 16 Maple Avenue, Pennsgrove, N. J.; Roger B. Johnson, Cincinnati, N.Y., Box 17, business address: Massachusetts Hall, Cambridge 38, Mass.; Ark Richards, 801 Castle Point Terrace, Hoboken, N. J.; Chuck Drew, 2012 Bryant Avenue South, Minneapolis, Minn.

1920

KENNETH F. AKERS, *Secretary*, 59 Dwight Street, Brookline, Mass.

Another quarterly of the REVIEW has rolled around and I have only a few meager notes to put in for the old Class of 1920. What is the reason? Merely that I haven't received many letters from the gang. If you all will write snappy letters I shall publish them word for word as you will find some among these notes. You'll think I am a perpetual "gloom" — but I have a rotten imagination, and I need "facts" before I can compile Class notes. Here goes for what I have!

Ed Howard dropped me a line last December from Ottawa, Illinois; he and "Sid" Griffin and "Andy" Johnson are using the pick and shovel with the Highway Commission, in an attempt to give the State of Illinois a few roads that will be passable. "Johnny" Johnson seems to have his old former tendencies toward "wine, women and song."

Jawn Perkins, Jr., remembered the Class in an announcement of his marriage to Hazel Marion Hamilton of Louisville, Kentucky. I take the opportunity to tell the gang that said momentous event occurred on February 14, 1922.

Austin Higgins again comes to my rescue with some good news. He writes as follows: "While in New York last I put up at the Tech Club and discovered on the night of my arrival that there was to be a banquet of all Technology men in New York at the 'McAlpin.' Of course I took it in and was delighted to see that 1920 was tied with, I think, 1917, for the second largest number present, thirteen. Among those present were 'Bud' Cofsen, Ross, Atwater and L. D. Wilson."

George Morgan still hangs out with the Eastern Texas Electric Co. in Beaumont, Texas, and spends his spare time playing basketball and shooting ducks. (This letter was last fall, so rather inappropriate at this reading.)

Art Radasch writes a very interesting letter from Alfred, N. Y., where he has been made a "Prof" at the New York State School of Clay-working and Ceramics at Alfred University, his duties being along the lines of Course X. He says the college is "co-ed" and a regular "matrimonial bureau." Also, he imparts to us casually that he has been married "goin'-on" three years! Figure it out, gents! He says he uses "Doc" Lewis' style of chemistry and it makes his gang sweat just as much as 1920 did over the "Doc's"!

George Swift is to teach in Attleboro, and is to be head of the Mathematics Department.

L. D. Wilson has joined the ranks of our prospective Benedicts, having announced his engagement to Miss Emily Louise Thompson. This is a southern romance, begun when "L. D." was working for the Norfolk and Western Railroad in Virginia, and lasting through the acid test of separation, while L. D. sojourned with your worthy (?) secretary in Brookline, and was employed by the "Beacon oil." A definite date for the wedding has not been set.

"Heine" Haskell has also announced his engagement to Miss Beatrice May Williams of Brookline.

Carl Rowen has gone the above two men one better and was married in Rochester, N. Y. The better half is Miss Elizabeth Allen of Jamestown, N. Y.

The following news has been received from Syner & Brown, miners:

On July 8, 1921, Brown wrote from the Deer Trail mine at Marysvale, Utah, as follows:

"Syner and I are still prospering in hot Southern Utah, eating lots of hard boiled eggs and country sausage and working from eight to eighteen hours a day. We feel that the past six months' experience here has helped us considerable to learn something about cyaniding. One thing wrong about the mill is that there are too many pipe lines less than six feet off of the floor and I bump my head too often. A change that Syner would make is a lounging room for the shifters so they won't have to occupy the only chair in the solution room."

On January 9, 1922, Brown wrote from Plymouth, California, as follows: "I think that when I last wrote you Syner and I were with the Deer Trail Mines Company at Marysvale, Utah, where we both worked through each of the operating positions in their 100-ton cyanide plant, to shift bosses. We left Deer Trail last September in search of some job where we'd get some mining experience and finding none available we went back to milling at a small cyanide plant in Unionville, Nevada, where Mark Twain wrote 'Roughing It.' We 'roughed it' for one month there when the plant was closed down and we migrated to Reno and visited camps near there looking for something in our line

of work. Young engineers were too plentiful and all we could obtain were laboring jobs on the new mill at Gold Hill. We accepted these and found they were filled when we got back with our luggage. In November Syner was sent down here to Plymouth by a friend who is with this company to a mucking job on which he has been ever since. He did return to Reno to spend Christmas with me there and two days later I came down here with him to join the ranks of the pick-and-shovelers. Am anxious now to get on a job where there is promise of using my brain as well as my back which is still fairly straight in spite of mucking in a five-foot crosscut and pushing a 'bohunk' wagon. These 'Mother Lode' mines are surely hot and uncomfortable after the first two thousand feet depth."

Syner wrote on April 28 from the Deer Trail mine as follows: "I have been given a new job, that of shift boss. It's the best chance in the world to get experience for I'm only on at night time when the big boss is asleep and the whole mill is mine. Aside from having to see that everything from rock-breaker to tailings-conveyor is working I have to fight the mine foreman, who wants all the air and persists in using the compressed air for ventilation as well as for the machines."

On September 22 Syner wrote from Arizona Silver Mines Company, at Unionville, Nevada. "Since the first of the month Brown and I have quit Deer Trail, had a two weeks' vacation, and have gone to work again. Poor food, continual night shifts and nothing to do made Deer Trail unbearable for me so we packed up and left for Salt Lake City where I thought I might get an out of doors job or at least one that took place in the daylight. For two weeks we enjoyed the comforts of home at the University Club. After eight months of mountains the city was a great relief and we enjoyed ourselves by visiting friends, playing tennis, going to the moving pictures and best of all by going to bed at an early hour without that awful thought on our minds of having to get up in a few hours and work 'graveyard.' Then we got this job and it all stopped. We arrived at Imlay, the nearest railroad point, at 12.30 a.m. on the fourteenth and then waited for the stage to Unionville. The stage is the queerest thing in Nevada. What's left of it bears some resemblance to a Ford — the pieces are held together with wire and the passengers have to carry it up the hills. We had a delightful trip in or rather with it over a road which is a foot deep with dust, finishing up by leaving the poor thing by the roadside and making the rest of the twenty-five miles by means of a reliable hayrick. The camp is only a small one but it's as good as Deer Trail."

Letters like these are always interesting, and wish more of you would write such ones. I'll promise you I'll print them verbatim as I have done these. My "news" has run out and it is all your fault — you see I "pass the buck" whenever I get a chance. Here's to a bigger and better section for 1920 in the July REVIEW.— Yours for 1920, "Ken" Akers.

1921

R. A. ST. LAURENT, *Secretary*, 794 Morton Street, Mattapan, Mass.

CAROL A. CLARKE, *Assistant Secretary*, 528 Riverside Drive, New York, N. Y.

All members of 1921 who are in and near Boston desiring to go to Tech Night at the Pops during Senior Week write me and I will reserve tables so that we may all be together. This will be the only get-together this year so let's all turn out strong for an enjoyable evening.

John T. Rule, XV, is taking graduate work at Harvard. A recent announcement of his engagement to Miss Helen Whiting of Cambridge was received. — Edmund I. Howard, XIII, of Everett, also has shown the results of his efforts in announcing his engagement to Miss Marian F. Macduff, Wellesley 1920. The account in the *Boston Herald*, February 26, did not say what you were doing, Ed. Let's hear!

Now here's another nice warm letter, worthy of observance for its keen points, from R. W. Smith, XII. He writes from the State of Tennessee, State Geological Survey, Nashville:

"I have been intending to write you for some time and tell you that I am working for the Tennessee Geological Survey and not the Kentucky one, as you have me down in the November issue of the TECHNOLOGY REVIEW. My title is assistant geologist,

although my work since the close of the field season has varied greatly from that of office boy up. In fact my duties are numerous and varied.

I am having a great time here in Nashville. The southern girls are certainly all they are cracked up to be and I know enough of them to fill up my spare evenings pleasantly. One of my fair young friends here graduated from Wellesley last year and we spend much time fighting over the relative merits of Harvard and Technology.

At present I am rooming with two fine fellows, one, the chief patrolman of the Forestry Bureau, is a graduate of Ohio State and the Yale Forestry School, and the other, one of our field men, is a University of Kentucky man.

I hear from some of the '21 men occasionally. Cudworth, XII, was recently called home from Mexico by the illness of his father, but expects to return to work shortly. Russ Johnson, III, writes me he is enjoying his work in the copper district at Ducktown, Tenn., in spite of the fact that it is one of the wildest spots of the State. McKinstry, who got his S.M. in XII last year, is geologist at one of the mines near Cerro de Paseo, Peru. He wrote of a wild New Year's dance that ended with a ride to Cerro with the engineer of the special train drunk and trying to rival the speed of the Twentieth Century Limited. My regards to all the boys."

H. A. Tucker, VI, has recently accepted a position in the Engineering Department of the Western Electric Co. Harold is living at the Technology Club of New York, 17 Gramercy Park.

We hear H. O. Bixby, II, has a second lieutenancy, apparently in the Coast Artillery Corps. Bix can be reached at Sherwood Inn, Fort Monroe, Va. Wonder how he came to stray so far from what lives in Arlington!

L. J. Brown, VI, has left the New York Edison Co. and has returned to Boston, address unknown.

Course VI men will certainly regret to hear of the death of J. H. Becker, VI, '19, former research assistant and instructor of the Electrical Engineering Department, who was stricken with a heart attack as he was about to attend a football game in October.

J. A. Grimmons, VI, writes he is with the Malden Electric Company, studying the practical side of the game. Jack swears he has no intentions "whatsoever" along matrimonial lines. Say not so, old man. Address, 72 Thurston Street, Somerville, Mass.

H. M. Lane, VI, says he is oscillating between the Atlantic Ocean and the Cruft Radio Laboratory at Harvard on his work for John Hays Hammond. We suspect that A. F. Murray, VI, '18, is another "oscillator."

Buddy Turner, X, 13 Hubbard Street, Ludlow, Mass., is in technical work in Ludlow — and is not being bothered by the "Spring Itch." — Stuie Nixon, XV, don't get ram-bunctious about no mail but you bet it is gratifying to hear from you, telling how you are trying to compete with X-A in being a hunkie — Stuie is receiving mail at 111 Houston Avenue, Muskegon, Mich. Nice sounding town! Further extracts from Stuie's letter says that Warren Norton, XV, has left Muskegon, Mich., for New York to work in the advertising game with the *Brooklyn Eagle*, 89 Henry Street, Brooklyn, N. Y. — Karl Froeb, XV, is home again, working for his father in Terra Haute, Ind.

From the *Boston Post* the following extract is taken telling of the awards of seventy-seven science degrees:

"The corporation passed on the awarding of the degree of Bachelor of Science to seventy-seven men while eight received the degree of Master of Science and one that of Master of Architecture. Harold T. Dennison was awarded the architecture degree, the other masters being J. E. Ronnenberg, Edward L. Bowles, Thomas H. Frost, Chester C. Stewart, Geoffrey J. Greenfield, Paul C. Merrill, Koichiro Takeuchi and Minocher J. Kavasji.

Those named Bachelors of Science are: John J. Collins, Willard A. Fleming, W. M. B. Freeman, LeRoy M. Hersum, Karl Jetter, Andrew T. Johnson, Francis B. Kittredge, Frank L. Lazo, David A. Newcomer, Emmet J. Scott, Oscar B. Sias, William Wald and Arthur Winbaum, all in the department of Civil Engineering. From the Mechanical Engineering Department the following received degrees: Henry D. Baldwin, James H. Becker, Arthur H. Blake, Clinton L. Bond, Wolfe W. Brown, Edward P. Clark, William P. Corbett, Edward S. Dennison, Valdimir Dixon, Arthur Esner, Walter J. Hamburger, Paul L. Hanson, Harold F. Hunter, Donald F. Lyman, Lawrence C. McCloskey, James W. McNaul, Joseph C. Moosbrugger, Philip A. Melles, Chester R. Painter, Richard C. Poore, Harvey F. Rettew and Fred M. Rowell.

From the department of Mining Engineering the recipients are: A. D. Harvey, A. G. H. Anderson, G. H. LeFevre, W. H. Leonori, G. A. Leeche and O. A. Mills. Esther Marie Cornelia Nelson was graduated from the Architecture Department, while Leo Mann was awarded his degree from the Chemistry Department. From the department of Electrical Engineering, D. M. Burkett, T. B. Card, J. R. Carter, O. G. C. Dahl and P. B. Kimball were the men graduated. Samuel Rubin received a degree in general science; A. H. Fletcher in sanitary engineering and Palmer Scott in naval architecture.

In engineering administration the following received degrees: Clayton Westland, Charles Morss, Jr., Arthur W. Norton, Foster M. Post, Herbert Reinhard.

From the Chemical Engineering Department the following were given degrees: A. D. Addicks, C. B. Barton, W. A. Clark, A. R. Davis, F. T. Flaherty, R. B. Frost, Chu Chung Li, A. P. Munning, G. S. Safford, Pang-Nin So, O. G. Wilson, Alexander Wishnew, and H. A. Zager."

Yea! Bo! We're there! Now for a J-O-B.

Bill Ferguson, II, 93 Broad Street, Newark, N. J., sends a card: "Worked for H. R. Worthington for six months at Harrison, N. J., and then changed to the Clarke Thread Co. of Newark. C. L. Bond, II, is rooming with me and is employed by the Standard Oil Co. of New York. Jerry Collins, II, is also here and works for the K. B. Pulverizer Co. in New York. Met Ral Smythe, II, at the Club and he is in Rahway, N. J." Mighty glad to hear from you and keep coming.

Duke Price, X, is married. He is no more bald, is an assistant in X-A and drives the station's Ford breathlessly. We hear that Doc. Haslam almost swore when the Boston station put in a requisition for a new car recently.

From Phil Clark, Lehigh University, Bethlehem, Pa., Box 691, we have the following letter:

"As I was looking over my copy of the REVIEW recently it came across me that you had so much material for a report of the Class this last issue perhaps you might have a reaction and be hard pressed for news for the next, so I thought I should have a heart and send a few lines to you from which you might glean enuf news for at least half a sentence to incorporate in your report to the REVIEW.

Funny, isn't it, what some of us turn out to be? The fellow we thought would be a Harrison Hayward, 2d, turns out to be a bookkeeper, and the fellow who stood high in his class turns out to be a blacksmith. So it has been with me. Just one of the ordinary 'duds' and here I am at Lehigh with a so-called title of Instructor of Naval Architecture — note that! I am a titled gentleman! Pretty soft, isn't it? And yet it doesn't mean a blamed thing because they gave me that appendage for my name just to make me think I had a good job!

I surely am having the time of my young life trying to teach the fellows here some of the things I do not know. I am teaching an elementary and an advanced course in what we used to call 'Applied,' and that is about the best course of all. Every once in a while I catch myself using the old illustrations which Hayward used to drill into us. We just came to Horizontal Shear and the bums did not know what it was, so I eased their minds by telling them. That proved they were human, for nobody 'got it' first time. And so it goes. We are having mid-year's now and I used to think the profs had it soft for they had no classes during exams but just 'stuck around' hoping we would flunk. But I find that in reality an exam week is as hard on the instructor as the men, so lend me all the sympathy you can afford. I have to think twice before I flunk a fellow because I happen to know what it means to lose out, though here they do not have to hand over the five bones for a condition exam.

The men here seem to be a good bunch and on the whole I am having a real time of it. The only bad thing is the salary. How can I buy a car, a fur coat, a mansion and a harem [He doesn't want much!] on three dollars a week? I bet you can't solve that on your slip stick.

If you see any of my Course XIII bunch tell them I like mail! The last I heard of Joe Hauber, XIII, was that he was in the paving block business in Hastings, N. Y."

This is a real letter, fellows, and does the secretary's heart good to receive them. The more the merrier.

Bill Irwin, XV, and Frank Blewer are in New York with Harris Forbes Co. — Abe Watov, XV, is a State chemist in New Jersey and is staying at 101 Hancock Avenue, Trenton, N. J.

Jack Kendall, XV, sent me a most pleasant Christmas and New Year's picture calendar and greeting combined the picture showing Jack on the running board of their car with his mother at "Sumit Raton, Pass." I never knew Jack as a poet, but see if this verse isn't pretty good:

"Good roads, bad roads, o'er ten thousand miles;
Chuck holes and bumps which make frowns and smiles.
But, old Pal, no bumps jarred my friendship for you,
So have a grand Christmas and swell New Year, too."

He says he's "general roust-a-bout in his dad's office, real estate, etc., in Pasadena, attending to everything that no one else cares to do — repairs to all buildings, placing and writing all ads., setting all 'for sale' signs, collecting rents and insurance 'n' everything." Pretty soft.

Edward M. Howard, I, writes: "S. P. Griffin, I, E. M. Howard and A. T. Johnson, I, are with the Illinois Highway Commission and located at present at Division of Highways, New Clifton Hotel, Ottawa, Ill." — Herb Reinhard, XV, has his name on the stationery of James V. Giblin, certified public accountant, as an industrial engineer. Herb is at 755 Boylston Street, looks like a polished salesman with no less than a million dollars. Having just written this dope I find that Herb has swopped to the telephone business, learning from the ground up. — Stubby Whitten, X, is at Carlstrom Field in the air service. Stubby was married some time ago in Malden. — Red Bachmann, X, was in town over a week-end not long ago. He came down from the Pejepsco Paper Co., Brunswick, Me., and was here long enough to be initiated into the 'Shifters' and to get trimmed at bowling and pool. Come again, Red. — Sam Jones, VI, was recently seen at the Tech circus eating hot dogs and frequenting the Tech bar. Sam is a research assistant in the Electrical Engineering Department at the Stute and has an article in the March *Tech Engineering News* on 'Transient Surges on Power Lines.' It seems high-faluting but it's good stuff. — Larry Conant, XV, is with Professor Schell assisting with the happy family in Course XV. Larry recently bought a diamond and is open to congratulations and other things engaged men need. By the way, Larry's writing a book which is due to decrease a freshman's wealth and increase his supply of good dope as to how to stay at the Institute and still be happy. — John Sherman is back in Boston engaged in sanitary engineering. Did you find the Patent Office too tame, Johnny? He is now with Metcalf & Eddy on Beacon Street. — Val Vallarta, XIV, is at the Institute carrying work in the Electrical Research Department for his Ph.D. which he expects to get in 1923. — Dan Harvey, III, has gone to Chili with Braden Copper Co., duties unknown. — Joe Lurie, X, after several changes is with the Boston Belting Co. as a chemist. In response to a recent inquiry he says he is perfectly satisfied and plans to stay. Joe must be getting his three squares and a soft pillow to be so satisfied.

Dugald C. Jackson, Jr., writes from 5 Mercer Circle, Cambridge, Mass.:

"I do not know whether you have me listed among the sheep or the goats, but at any rate please put me on the 1921 rolls. I doubt if you have my address at all, for I entered Tech in Course VI-A as a junior in the fall of 1919, after I returned from France. Being in Course VI-A, which you may remember is a five-year course leading to an S.M., I received no degree last June. This next June, however, by the grace of Allah (may his name be exalted), I shall get my master's degree, with an S.B. thrown in as of December, 1921. During my junior and senior years I voted with 1921 and I wish still to be considered a member of the class.

There are twenty-seven of us in VI-A who hope to receive master's degrees in June and I think that all of them consider themselves members of 1921. About half of them have gone through the Stute from the very beginning. One of these is H. K. Nock who was married last fall to a Newburyport girl, and he certainly got a mighty charming wife. The other half of the VI-A bunch which graduates (?) this coming June entered M. I. T. from other colleges at various times during the four years. Of these John A. Scott who, like me, came to Tech after sojourning in France for a spell, is married and has a six-months old daughter; and D. O. Woodbury having tried Harvard, the Navy, Leland Stanford and finally the Institute, decided eventually that married life was the only thing and acquired a very delightful commanding officer last September. There are others who are not married, but have hopes; for instance, Paul H. Rutherford, who announced

his engagement some time during the winter to a Wellesley junior. I am giving these data in case you do not have them; the man who knows all the latest scandal about the VI-A bunch is Harold H. Cake at 95 Newbury Street, Boston, for he is the secretary of Hexalpha, the VI-A society.

In regard to myself, I was married during the war, January 20, 1918, to be precise, to Elizabeth Wyer, Radcliffe 1916, of Portland, Maine, and we have a three-year old son. He was born while I was in France, so I had no say in regard to the name, and Mrs. Jackson labeled him Dugald Caleb, 3d. We now have a second son, David Whitman Wyer, born on March 23, 1922.

Remember, I want to be listed with a real class, so be sure to get my name on your rolls. My permanent mailing address which is also my living address until next summer is given above. Please let me know if 1921 will have any sort of a get-together this June; if we do, I shall try to be there."

Dich Windisch, XV, is in New York, exact whereabouts not known, but is in the bond game, and not brewing — much. — Wint Dean, XV, was in town recently on pleasure. In fact he said he might be married when he went back — back meaning to the Nichols, Dean & Gregg Co. in St. Paul, Minn. Wint is selling blacksmith and automobile supplies for the above company, covering parts of Minnesota, Iowa and Wisconsin. — Bob Parker, XIV, who up to late has been "Chemiking" for the Stackpole Carbon Co., resigned and is in the sales department of the Harbison Walker Refractories Co. of Pittsburgh, Pa. Bob writes: "Ray, there is something I have been wondering about. In every issue of the REVIEW I read of many more of the Tech '21 men getting married and what I want to know is where they get the job that will support them double. I have a hard enough time meeting my promissory notes when they come due."

Freddy Binns, X, is a research chemical engineer with the Virginia Industrial Chemical Co. of West Norfolk, Va. Fred is in Boston at 131 State Street. We see him at the Stute quite often, where he finds the library quite valuable. — V. H. Sanders, X, is with the Stackpole Carbon Co. in St. Mary's, Pa.

"Paul C. Howe, I, is a second lieutenant, C. A. C., Regular Army, with rank from November 1, 1921. However, Howe will remain at the Institute until the end of this academic year in order that he might complete some graduate work." — *From the Tech.*

Bob Eckles, IV, announces his engagement to Margaret Gallinger of Amherst. Bob prepared for Tech at Amherst and Miss Gallinger's father is a prof at Amherst. Small town gossip, you know, but of interest. Miss Gallinger is at Simmons, where she is active in undergraduate affairs.

Fuzzy Butler, III, writes that he has surprised himself and finds himself working in a bank at present, the trust department of the Union Trust Company of Cleveland. This institution seems to be rather partial to college men and although he has been with them only two months they are breaking him in to a job which has charge of over two hundred trust accounts, some running over a million dollars. He states it is rather a large order for a greenhorn but is working hard at it and emphatically states the phrase, "bankers' hours" means absolutely nothing. He hopes that when he gets a little further along he will be able to screw up his courage to the point where he can ask for Sundays off. He is also attending night law school. He had a very enjoyable summer playing golf, tennis, swimming, etc. A party of four were marooned on an island in a lake in Canada for two months, with four girls and eight chaperons. He writes that a woman has entered his life. This is presumably the result of the Canadian summer trip.

If you know the address of any of the following men please help us complete our files by shooting it in.

Robert E. Beard, X; Emil J. Bachmann, VI; David J. Baker, I; Elmer L. W. Barry, II; Arnold R. Davis, X; Harold Finkelstein, III; Laurens M. Hamilton, XV; Carolus L. Eskergian, IX-B; Jose A. De l'Aguila, II; Raymond F. Cornell, VI; Elmer W. Davis, II; Joseph H. Bayle, II; Charles W. Richards, X; William C. Wade, XIII-A; Melvin C. Rose, XIII; Homer N. Wallis, XIII-A.

